AMERICAN CINEMATOGRAPHER

The Motion Picture CAMERA Magazine

this issue

How "Invisible Man" was made

What is Montage?

Photographing in China

Riddle Me This

. . . and other features

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1934

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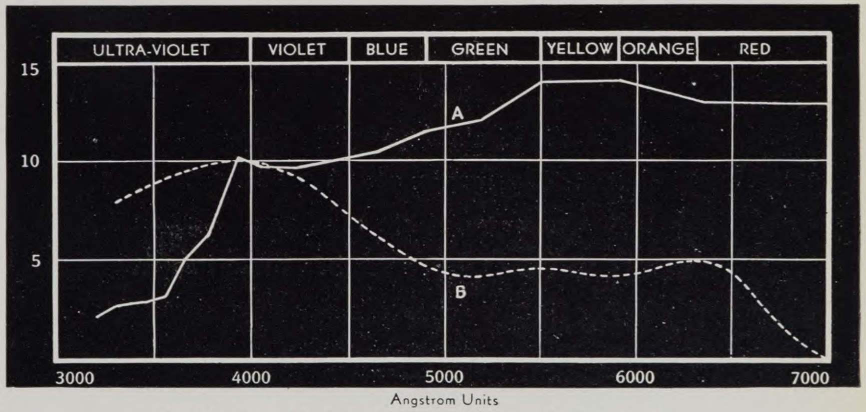

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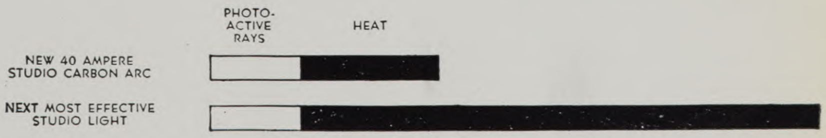

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THE AMERICAN SOCIETY OF CINEMATOGRAPHERS was founded in 1918 for the purpose of bringing into closer confederation and cooperation all those leaders in the cinematographic art and science whose aim is and ever will be to strive for pre-eminence in artistic perfection and technical mastery of this art and science. Its purpose is to further the artistic and scientific advancement of the cinema and its allied crafts through unceasing research and experimentation as well as through bringing the artists and the scientists of cinematography into more intimate fellowship. To this end its membership is composed of the outstanding cinematographers of the world with Associate and Honorary memberships bestowed upon those who, though not active cinematographers, are engaged none the less in kindred pursuits, and who have, by their achievements, contributed outstandingly to the progress of cinematography as an Art or as a Science. To further these lofty aims and to fittingly chronicle the progress of cinematography, the Society's publication, The American Cinematographer, is dedicated.

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RIDDLE ME THIS

The Riddle: Would you consider it an advantage to have a smaller, more compact and portable dimmer for dimming individual lamps when making effect-lightings and moving-shots? Also, what improvements could be made in the means of controlling light-intensity in such cases?

JEROME H. ASH, A.S.C.: If such a device could be made available without being prohibitively expensive, it would be a wonderful advantage in many instances. For example, in making visionary shots by reflection, such control would be a very great aid to the cinematographer. It would seem possible that individual dimmers could be developed along the lines of the small ones used in household lighting, enlarged only enough to stand the higher load imposed by studio lights.

KARL STRUSS, A.S.C.: Individual dimming is often vitally necessary; for example, suppose we have a travelling-shot in which we move from a close-up to a long-shot (or vice-versa), especially in a big set. Most of the front light upon the people must come from units placed on the perambulator with the camera, and unless we are able to dim these lights individually as we approach the player, we cannot preserve the balance and quality modern cinematography demands. Naturally, a more compact dimmer would be invaluable in such circumstances.

WILLIAM A. REES, A.S.C.: I use dimmers constantly—especially to control individual lamps in shots where the camera must move away from a player, as in a scene that begins with the player seated, and ends with him standing. I would greatly appreciate a smaller, handier and more portable dimmer: the present unit is about two feet square, and weighs approximately seventy-five pounds; it would certainly seem both possible and advisable to evolve a smaller and more efficient unit.

M. A. ANDERSEN, A.S.C.: I'd certainly appreciate a smaller, more portable dimmer for such work. Where you have to work quickly, and still get good photography and lighting effects, such a dimmer would be invaluable.

RAY JUNE, A.S.C.: I very frequently use a dimmer to control one or two lamps—for example, when a player must enter from a closed door: if the amount of front light necessary to properly illumine the player were concentrated on the closed door, the door would be badly overlit; the dimmer solves the problem excellently. Of course, if a smaller and handier dimmer could be had, it would be a great advantage in such shots.

WALTER STROHM (Head of Electrical Dept., United Artists Studio): A more compact dimmer for use with only one or two lights would certainly be useful. However, the idea of dimming lights by a voltage-reducing resistance suffers from the disadvantage that as the voltage drops the color-temperature of the lights is altered, growing progressively redder, until it is soon of little photographic value. I have for some time felt that the problem could be better solved by use of lamp-globes fitted with multi-plane filaments, and wired in connection with a rheostat so that, for a low intensity, but a single filament would be used—but at its full strength, giving normal color-emission—while the higher intensities would be obtained by gradually bringing into use the supplementary filaments.

PETER MOLE (Mole-Richardson, Inc.): Smaller dimmers could be built, and be quite satisfactory from an engineering standpoint; but it is questionable whether they would be adequately sturdy to stand up under the hard knocks of studio use. There are a number of methods by which such a device could be made—as a laboratory experiment; but designing one sturdy enough for regular use is a difficult problem. We are working on the problem, however. The situation would be greatly helped, from the design standpoint, if studio lighting were handled more like stage lighting, that is, as at least a semi-permanent installation, controlled from a central switchboard on the stage.

VERNON L. WALKER, A.S.C.: Such a dimmer would be very useful in special-process work.

CHARLES G. CLARKE, A.S.C.: For my own use, I don't see much use for such a device, as we already have a wide

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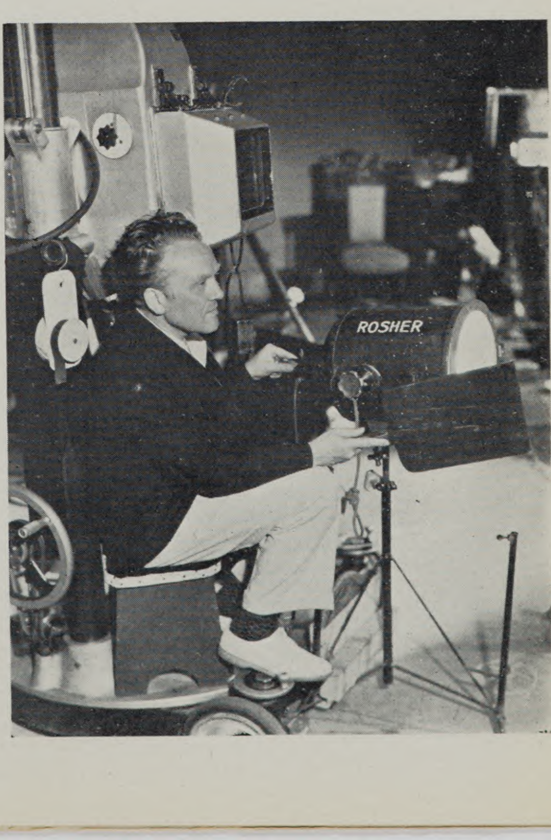


Lamp referred to by Charles Rosher, A.S.C. The operator's left hand controls the intensity of the beam, and the paddle used in his right hand shades the subject for modeling purposes. The lamp may be used on the floor, or attached to camera or perambulator.

Just What Is "Montage"?

by
Karl Freund, A. S. C.

Karl Freund A.S.C.

THE WORD "Montage" is probably the most maligned—and certainly the least understood—of any used by English-speaking film-people. Here in America we speak (approvingly and otherwise) of the "Montage" technique of the Russian films, or comment upon the "Montage sequences" and "Montage shots" in this film or that. But very few of us have a really clear mental picture of what the word means—and fewer yet could define it, if asked.

Actually, "Montage" is nothing new; neither is it a Russian invention. The word itself is simply the French word for "editing" or "assembling," and the Russian technique to which it is modernly applied is simply a utilization of the basic principles of silent-film technique adapted to suit the peculiar needs of the Russian Directors, Cinematographers and Producers.

In the early days of the cinema, it will be remembered, France led the world in both the Art and the Technique of making moving pictures. Up to the year 1914, French Directors and Cinematographers reigned supreme in almost every country, and (especially in continental Europe) they took their terminology with them. One of these words was "Montage," which literally means "assembling," and which they used as we use the words "cutting" or "editing." The word is used in that sense throughout most of Europe, even today.

After the war, though France never regained her lost cinematic prestige, the term "Montage" took on a new significance. The Russian film industry revived under the Soviets, and startled the world with a new and virile technique. Especially in the hands of Eisenstein, this technique was expressed by a bewildering use of cutting. Dazzling effects were gained by artful inter-cutting of extremely short scenes—"flashes," as we say in Hollywood; but Eisenstein reduced these flashes to scenes far shorter than anything previously attempted. Instead of measuring his scenes in meters or feet, he often measured them by frames. In his scripts one can frequently see scenes bearing such notations as "27 frames long"; "9 frames"; "6 frames in length" — and some scenes have contained but three frames! Eisenstein, himself, regarded the technique as principally, if not exclusively, a matter of cutting; hence, when asked about it, he described it as "Montage"—which was simply the word used in the Russian studios to indicate cutting or editing. And so the word "Montage" took on a new meaning.

It is in this newer sense that the American studios have adopted the expression. In our adaptation of the Eisenstein technique, we have added to it the use of multiple printing, optical printing, and the like, so, accordingly, we have "Montage sequences" and "Montage shots." As the execution of such effects is almost invariably entrusted to Special Effects specialists, "Montage" has come to be regarded definitely as a special photographic effect, and, as such, rather a mystery to the majority of film people, technicians and artists alike.

The Russian Montage technique was not evolved as any attempt to create a new art-form, but grew out of the necessity of overcoming the two greatest obstacles that lay in the path of the early Soviet film-workers. The technique is based on principles established largely by such American film-pioneers as D. W. Griffith, and known and practiced universally in making silent pictures.

It was this writer's good fortune, when working in Germany, to come in rather intimate contact with most of the Russian Directors and Cinematographers during the formative years of the Soviet film-industry, for they regarded the German studios as both their base of supplies and their teacher.

In Russia the motion picture has had to appeal to an audience numbered in the hundreds of millions, 90% of which was at the start completely illiterate—and who spoke several hundred different languages and dialects. Accordingly, the Russian cinema had from the beginning to be completely visual in its appeal. The story had to be told visually—with the camera—or not at all. In silent films, titles had to be held to the minimum, if not utterly eliminated; and even in sound-films, the dialog had to remain purely an auxiliary to the visual.

The second obstacle, which, in my mind, was even more truly the cause of the Montage technique, was the early poverty of the Government—and accordingly, of its film branch. Eisenstein and Pudovkin have both told me that when the Soviet Film Trust was first formed, there was not only little or no equipment with which to work, but there was actually no money with which to buy film! When at last some money was available, there was very little of it; so the Soviet Cameramen and Directors would send down to Berlin to buy "short ends" from the German studios—little bits of five, ten and fifteen feet of film left in the camera-magazines after we had made our scenes. Rarely did they have the good luck to obtain more than twenty feet of film in a single piece; naturally, they had to adapt

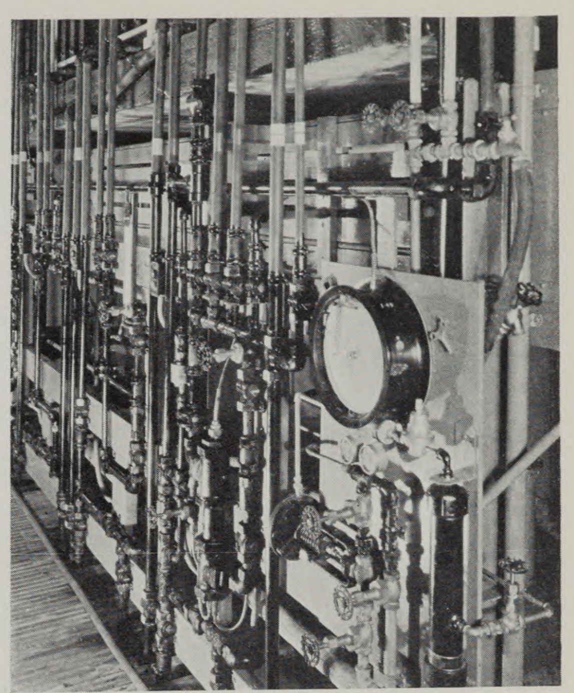
Continued on Page 210

Special Laboratory for Transparencies

by

A. Farciot Edouart, A. S. C.

Head of Transparency Dept., Paramount Productions



Part of the circulating system, Paramount Transparency Dept. Laboratory, showing special rubber tubing, and (in foreground) one of the four automatic-recording regulator-thermometers.

AT THE Paramount Studio, we are fortunate in having a separate, small laboratory devoted exclusively to supplying the Transparency Department. At present, this laboratory is used solely for making the positive "Background Plates" used in this process, although the ultimate ideal would naturally be to extend its operations to handle the Department's negative developing, as well, in order to obtain ultra-fine-grain results impossible in the volume production of a larger plant.

At present, however, the Transparency Department's negative developing is handled adequately by the studio laboratory: the developed negative and one normal print being delivered to the Transparency staff. This print is not for background use, but is made solely for reference purposes, and is filed in the Department's film-library.

When the scenes desired for background use have been segregated, the negative is sent to the Department's laboratory for printing. This operation is usually done on our Optical Printer, in order to assure absolute precision. For our purposes, the printing must be extremely accurate: and tests have proven that no contact printer is sufficiently accurate. The limiting factor in this operation is the accuracy of the film-perforations themselves, and it is a tribute to the design and operation of Bell & Howell Standard Perforators that no practical contact printer has been made sufficiently accurate to approach the accuracy of the perforation. Accordingly, we use an Optical Printer designed and operated to tolerances impossible in contact printing. The timing of the prints is, of course, determined by the most scientific densitometric tests.

The prints are developed on a specially designed developing-machine, which enables us to exercise an unusual degree of control over the result. For the projection-Transparency process, only the normal operations of preliminary soaking, developing, rinsing, fixing, washing and drying are necessary; but when the color-separation Transparency process is used, such additional processes as bleaching, mordanting, drying, etc., are involved, making a total of 22 separate operations, all of which can be handled by the one machine, in a single, continuous operation. The machine is so designed that any one of these operations may be accelerated or retarded at any time without interfering with any other phase.

As a rule, prints intended for projected-background use are made to a rather higher Gamma, or contrast, than prints for normal uses: our equipment and methods permit a range in Gamma from 0.65 to a maximum of 2.70, whereas normal laboratories seldom, if ever, have a range greater than from about 1.90 to 2.00. The actual Gamma to which we make our prints must naturally depend upon the requirements of the composite shot—the type of foreground action, the key and style of foreground-lighting, the size of the screen, etc.

It is obvious that equipment and methods permitting such exact control would be valueless if operations were not conducted on an equally scientific basis. To this end, even routine operations are recorded as painstakingly as though in a research laboratory. Every detail of every operation is recorded, and filed away for future reference, so that we can, at any time, duplicate any shot made within the past five years, with the assurance that, since every possible factor in the making of the print has been reproduced with scientific accuracy, the result, too, must be identical.

The design and construction of this laboratory extended over a period of more than three years, over half of which was devoted to exhaustive tests of every type. The materials used for the construction of the developing-machine, for example, have an important bearing, not alone upon the useful life of the machine and economy of operation, but upon the quality and uniformity of the results. It is vitally important that none of the materials used shall have any chemical effect upon the solutions, and, through them, upon the film. Many materials which seem to have no such effect may actually do so over a period of years: therefore, exhaustive tests were made of every material. The metalwork, for example, was tested until but two possible choices remained: then samples of these two metals, in several sizes, were immersed in samples of our standard solutions for periods up to two and one-half years. The results of each test were tabulated, and, wherever more than one such test was made of any metal, the tests were averaged. Ultimately, Rezistal No. 4 was chosen, as the tests proved it to have no effect upon any of the solutions.

Continued on Page 212

PHOTOGRAPHY of the MONTH

"FIFTEEN WIVES"

Invincible

Directing Cinematographer: **M. A. Andersen, A.S.C.**

The Film Daily (July 17, 1934): Photography "Good."

"I GIVE MY LOVE"

Universal

Directing Cinematographer: **George Robinson, A.S.C.**

The Film Daily (July 17, 1934): Photography "A-1."

"HIS GREATEST GAMBLE"

RKO Radio

Directing Cinematographer: **Teddy Tetzlaff, A.S.C.**

The Film Daily (July 18, 1934): Photography "A-1."

"SHE LOVES ME NOT"

Paramount

Directing Cinematographer: **Charles Lang, A.S.C.**

The Film Daily (July 19, 1934): Photography "Fine."

"BACHELOR BAIT"

RKO Radio

Directing Cinematographer: **David Abel, A.S.C.**

The Film Daily (July 20, 1934): Photography "Fine."

"GRAND CANARY"

Fox

Directing Cinematographer: **Bert Glennon, A.S.C.**

The Film Daily (July 20, 1934): Photography "A-1."

"SMOKING GUNS"

Universal

Directing Cinematographer: **Ted McCord, A.S.C.**

The Film Daily (July 20, 1934): Photography "Good."

"CLEOPATRA"

Paramount

Directing Cinematographer: **Victor Milner, A.S.C.**

The Hollywood Reporter (July 23, 1934): "And of course, the exquisite photography of Victor Milner makes the visual entertainment a thing of joy and beauty."

Daily Variety (July 23, 1934): "Battle scenes on land and sea, sybaritic orgies on the queen's galley, splendors of court and more intimate episodes are superbly photographed by Victor Milner."

The Film Daily (July 25, 1934): "—while Victor Milner's photography is also deserving of a bow." Photography "Superb."

"BLIND DATE"

Columbia

Directing Cinematographer: **Al Siegler, A.S.C.**

The Hollywood Reporter (July 23, 1934): "—and Al Siegler photographed it well."

Daily Variety (July 24, 1934): "Photography is impressive—"

"SHE WAS A LADY"

Fox

Directing Cinematographer: **Bert Glennon, A.S.C.**

Daily Variety (July 25, 1934): "Photography Good."

"MILLION DOLLAR RANSOM"

Universal

Directing Cinematographer: **George Robinson, A.S.C.**

The Daily Variety (July 27, 1934): "Camera work is by George Robinson, who has secured effective night shots and clearcut interiors."

"THE CAT'S PAW"

Fox

Directing Cinematographer: **Walter Lundin, A.S.C.**

Hollywood Reporter (Juy 27, 1934): "Walter Lundin's photography does wonders for the players—"

Daily Variety (July 27, 1934): "Walter Lundin has photographed well."

The Film Daily (July 30, 1934): Photography "A-1."

"WILD GOLD"

Fox

Directing Cinematographer: **Joseph Valentine, A.S.C.**

The Film Daily (July 30, 1934): Photography "A-1."

"BEYOND THE LAW"

Columbia

Directing Cinematographer: **Al Siegler, A.S.C.**

The Film Daily (July 24, 1934): Photography "Good."

Hollywood Reporter (July 30, 1934): "Photography standard, except for some overlighted close-ups."

"SHE HAD TO CHOOSE"

Majestic

Directing Cinematographer: **James S. Brown, Jr., A.S.C.**

Daily Variety (July 30, 1934): "—and is handsomely photographed."

"HIDE-OUT"

M-G-M

Directing Cinematographer: **Ray June, A.S.C.**

Daily Variety (July 30, 1934): "Photography is swell."

Hollywood Reporter (July 30, 1934): "Ray June's photography is, of course, the best."

"SHE LEARNED ABOUT SAILORS"

Fox

Directing Cinematographer: **Harry Jackson, A.S.C.**

The Film Daily (July 28, 1934): Photography "Good."

"ROMANCE IN THE RAIN"

Universal

Directing Cinematographer: **Charles Stumar, A.S.C.**

Hollywood Reporter (July 31, 1934): "Charlie Stumar's photography is spotty."

Continued on Page 208

Discharging an OBLIGATION

ANY manufacturer who has won his way into the confidence of a great industry is under obligation to maintain the standards that have given his product preference. Eastman Super-Sensitive "Pan" is continually discharging such an obligation. On the lot . . . in the laboratory . . . on the screen ... it is unfailingly delivering the same qualities that first made it a sensation in the motion-picture world. Eastman Kodak Co. (J. E. Brulatour, Inc., Distributors, New York, Chicago, Hollywood.)

EASTMAN *Super-Sensitive Panchromatic Negative*

PHOTOGRAPHY OF THE MONTH

Continued from Page 206

"BRITISH AGENT"

Warner Bros.

Directing Cinematographer: **Ernest Haller, A.S.C.**

Daily Variety (August 1, 1934): "—and photography also rate high praise."

Hollywood Reporter (August 1, 1934): "—and the photography by Ernest Haller is very beautiful."

Film Daily (August 2, 1934): Photography "A-1."

Motion Picture Daily (August 3, 1934): "Ernest Haller's photography is an asset."

"THE PERSONALITY KID"

Warner Bros.

Directing Cinematographer: **William Rees, A.S.C.**

The Film Daily (August 1, 1934): Photography "A-1."

"JUDGE PRIEST"

Fox

Directing Cinematographer: **George Schneiderman, A.S.C.**

The Hollywood Reporter (August 4, 1934): "And right along with these people goes the camerawork of George Schneiderman, whose picturization of a sleepy southern town, stretched out in the sunlight, makes you yawn lazily and pleasantly just to look at it."

Variety (August 4, 1934): "Photography is excellent."

"THE GIRL FROM MISSOURI"

M-G-M

Directing Cinematographer: **Ray June, A.S.C.**

The Film Daily (August 4, 1934): Photography "Fine."

"KANSAS CITY PRINCESS"

Warner Bros.

Directing Cinematographer: **George Barnes, A.S.C.**

Daily Variety (August 6, 1934): "George Barnes' photography is top notch."

"THE MOONSTONE"

Monogram

Directing Cinematographer: **Robert Planck, A.S.C.**

The Film Daily (August 7, 1934): Photography "A-1."

"STOLEN SWEETS"

Chesterfield

Directing Cinematographer: **M. A. Andersen, A.S.C.**

The Film Daily (August 7, 1934): Photography "Good."

"MADAME DUBARRY"

Warner Bros.

Directing Cinematographer: **Sol Polito, A.S.C.**

Daily Variety (August 7, 1934): "—photography by Sol Polito and art direction by Jack Okey, all contribute materially to the gorgeous quality of the film."

"THE HUMAN SIDE"

Universal

Directing Cinematographer: **Norbert Brodine, A.S.C.**

The Hollywood Reporter: "Brodine's photography is okay for the most part, but a little harsh in spots."

"YOU BELONG TO ME"

Paramount

Directing Cinematographer: **Leo Tover, A.S.C.**

Hollywood Reporter (August 9, 1934): "Leo Tover's photography cannot be criticized."

Daily Variety (August 19, 1934): "Photography by Leo Tover has no flaws."

"THE FOUNTAIN"

Radio

Directing Cinematographer: **Henry W. Gerrard, A.S.C.**

Hollywood Reporter (August 9, 1934): "Henry Gerrard's photography is very beautiful."

Daily Variety (August 9, 1934): "Photography is average, with Miss Harding none too well lensed in spots."

"DESIRABLE"

Warner Bros.

Directing Cinematographer: **Ernest Haller, A.S.C.**

Daily Variety (August 10, 1934): "Ernest Haller's photography adds the finishing touch of class."

Hollywood Reporter (August 10, 1934): "Ernest Haller's photography is very good throughout."

"SCHOOL FOR GIRLS"

Liberty

Directing Cinematographer: **Harry Newmann, A.S.C.**

Daily Variety (August 10, 1934): "Photography by Harry Newmann is average."

"WE'RE RICH AGAIN"

RKO Radio

Directing Cinematographer: **Nick Musuraca, A.S.C.**

The Film Daily (August 11, 1934): Photography "Fine."

"THE LADY IS WILLING"

Columbia

Directing Cinematographer: **Joseph Walker, A.S.C.**

The Film Daily (August 11, 1934): Photography "Good."

"HAVE A HEART"

M-G-M

Directing Cinematographer: **James Wong Howe, A.S.C.**

Hollywood Reporter (August 11, 1934): "Jimmy Howe's photography is okay."

"CHAINED"

M-G-M

Directing Cinematographer: **George Folsey, A.S.C.**

Daily Variety (August 13, 1934): "George Folsey's photography is outstanding, particularly sea shots."

Hollywood Reporter (August 13, 1934): "And, speaking of being seen, George Folsey has done one of the best photography jobs you're likely to see. The process shots are well-nigh perfect. The ranch scenes are exquisite, and Joan Crawford hasn't looked as beautiful and young and vibrant in months and months. Gable is beautifully photographed, too—"

Motion Picture Daily (August 14, 1934): "The production's photography, settings and costumes are all that could be desired."

"IRIS MARCH"

M-G-M

Directing Cinematographer: **Charles Rosher, A.S.C.**

Hollywood Reporter (August 17, 1934): "The direction of Robert Z. Leonard is restrained and touched by moments of great beauty. The same may be said of Zoe Akins' screen play, and certainly of Charles Rosher's photography."

"MRS. WIGGS OF THE CABBAGE PATCH"

Paramount

Directing Cinematographer: **Charles Lang, A.S.C.**

Hollywood Reporter (August 17, 1934): "—and Charles Lang's photography is a big asset."

Daily Variety (August 17, 1934): "Photography is oke."

"BELLE OF THE NINETIES"

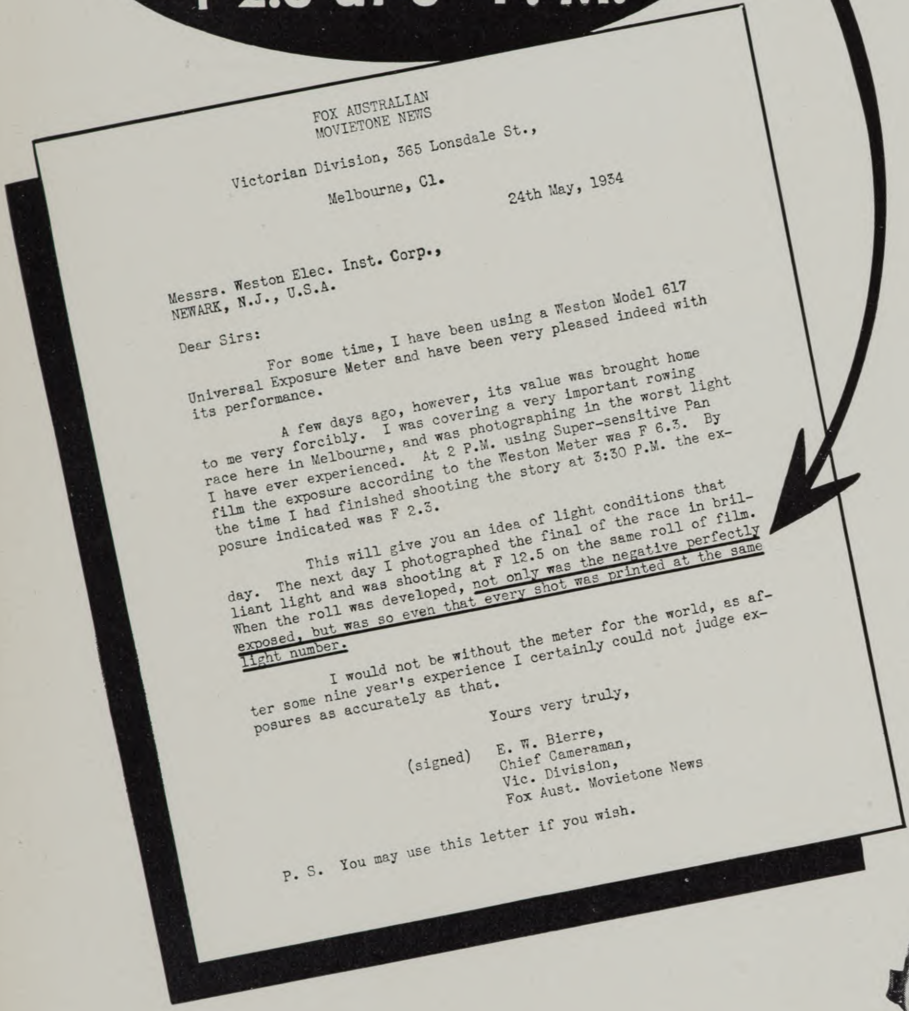
Paramount

Directing Cinematographer: **Karl Struss, A.S.C.**

Daily Variety (August 18, 1934): "Karl Struss' photography is excellent, with especial fine effects in the camp meeting interlude."

Hollywood Reporter (August 18, 1934): "The photography by Karl Struss is too lovely and makes Miss West look like a gorgeous woman."

His Weston Meter Read
F 6.3 at 2 P. M.
F 2.3 at 3^{30} P. M.



FOX AUSTRALIAN
MOVIETONE NEWS

Victorian Division, 365 Lonsdale St.,
Melbourne, Cl.

24th May, 1934

Messrs. Weston Elec. Inst. Corp.,
NEWARK, N.J., U.S.A.

Dear Sirs:

For some time, I have been using a Weston Model 617 Universal Exposure Meter and have been very pleased indeed with its performance.

A few days ago, however, its value was brought home to me very forcibly. I was covering a very important rowing race here in Melbourne, and was photographing in the worst light I have ever experienced. At 2 P.M. using Super-sensitive Pan film the exposure according to the Weston Meter was F 6.3. By the time I had finished shooting the story at 3:30 P.M. the exposure indicated was F 2.3.

This will give you an idea of light conditions that day. The next day I photographed the final of the race in brilliant light and was shooting at F 12.5 on the same roll of film. When the roll was developed, not only was the negative perfectly exposed, but was so even that every shot was printed at the same light number.

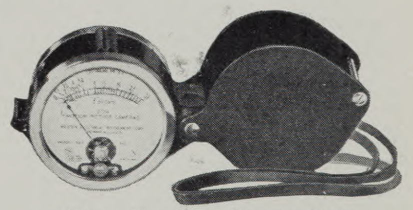
I would not be without the meter for the world, as after some nine year's experience I certainly could not judge exposures as accurately as that.

Yours very truly,

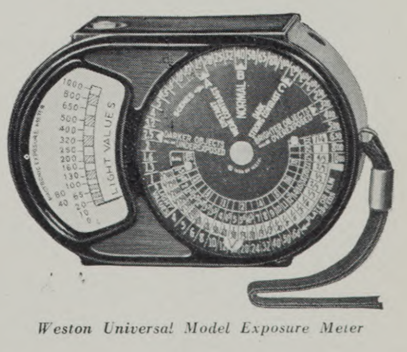
(signed) E. W. Bierre,
Chief Cameraman,
Vic. Division,
Fox Aust. Movietone News

P. S. You may use this letter if you wish.

In far off Australia, on the Continent, in every corner of the globe where photography is being done, there you will find Weston Exposure Meters in the hands of satisfied owners. Visit your dealer's today and see both models of this *proved* meter . . . the Weston Meter . . . Weston Electrical Instrument Corporation, 598 Frelinghuysen Avenue, Newark, New Jersey.



Weston Ciné Model Exposure Meter



Weston Universal Model Exposure Meter

WESTON *Exposure Meters*

JUST WHAT IS "MONTAGE"

Continued from Page 204

their technique to utilize these extremely short bits of film—and to utilize them efficiently.

The "Montage Technique," therefore, was due simply to the necessity for making pictures for a predominantly illiterate audience, using only the short scraps of film which would be regarded as worthless, waste material in any more prosperous studio. They did not create anything essentially new, but rather adapted established, silent-film technique to suit these requirements. But if they did not create, they were forced to refine the existing technique to a point where it became a close approximate of the ultimate of pure cinematographic expression. They were dealing with a predominantly illiterate audience, and one which spoke many different tongues: accordingly, they could not fall back on the two mainstays of directors in other lands who do not fully appreciate their medium—printed titles and, more recently, spoken words; they had to make every inch of film count, so they learned to make every frame, every move or action, vitally expressive.

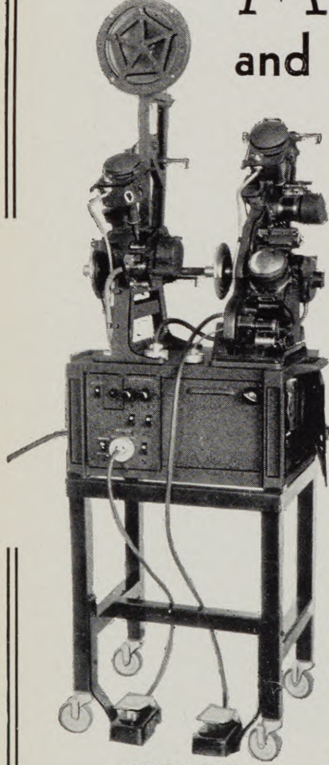
The natural means to attain these ends was by searching analysis of the basic principles of film technique. In the final analysis, the film-craftsman has five principal avenues of expression: pantomime, facial expression, viewpoint (or angle), chiaroscuro, and tempo, both physical and cinematic. These, rightly employed, can convey emotional messages even to the most primitive mind; and the Russians made full use of all.

Much of their pantomime, for example, became definitely stylized, for they reasoned that certain actions must inevitably indicate certain associated thoughts in any mind: for instance, hands outstretched, palms upward, suggest "give me"; palms downward, benediction; a figure advancing toward the camera (even in a "flash"), connotes aggression; while a retreating, or even backward-leaning figure suggests fear. In the same way, facial expression was analyzed and became stylized.

Russian friends have told me that one reason for their wide use of camera angles—aside from purely aesthetic considerations—was the early film-shortage. Obviously, if you have only short lengths of film with which to work, you must choose your angles with care, so that both composition and action will be most graphic. Working in this manner, often with only a few meters of film available at any one time (and no immediate prospect of getting another supply with which to continue filming), it is natural to see that both Director and Cinematographer would prefer to make a number of short, related shots, from a wide variety of angles.

In the assembly — or, if you will, "Montage"—of these scenes, the Russians followed essentially the same principles which have governed film-makers since Griffith and Bitzer discovered the close-up. Assembling the scenes selectively, so as to present smoothly upon the screen changes of time, place or thought; parallel action; to stress or exclude detail; and, above all, to build filmic tempo or rhythm: none of this is new in itself, though the restrictions under which the Russians worked forced them to apply them in a new way. Symbolism, and cutting to heighten contrast hark back to D. W. Griffith's early films. Cutting for suspense and for tempo have their origins in Griffith, as well as in scores of unnoticed comedies, "Westerns," and even newsreels. The bewildering effects of abruptly intercut "flashes" is, I am sure, in no small part an attempt to reproduce the effect of the optical effects in such German films as "Variety," "The Last Laugh" and "Metropolis," surmounting the barrier of the complete lack of optical accessories such as we enjoy here and in Germany.

In brief, every phase of "Montage" has its foundation in some basic part of silent-film technique, as developed in America or Germany. The mystery of "Montage" lies in the fact that the Russians had to refine these familiar principles to the utmost—and in the fact, too, that the Russians, unlike those of us making pictures elsewhere, had not only the inclination, but also the time to subject every film to detailed study: to searchingly analyze every scene, every movement, that they might produce their next film better and more efficiently. Before they had money for making actual films, they wrote scripts, and subjected them to this same detailed analysis: purely for practice in technique—if only theoretical practice. Every artist and technician participated in this study, and strove to find a rational, psychological explanation for everything. Imbued with the characteristic, Russian introspectiveness, they expressed their findings in psychologico-technical terms, all too often misunderstood by the everyday film craftsman elsewhere. And so "Montage," which all of us had known and, to some extent, practiced for years, became shrouded in mystery!



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TYPE UDX
Combination film viewer and sound reproducer.

China Photographically Ideal

Continued from Page 202

film "The Good Earth," and to show the Chinese as the human beings they really are, were denied permission to photograph their scenes, surely, he reasoned, we would go home and continue to produce the objectionable "yellow peril" films. Hence, it was far better to help us, rather than hinder. From then on, every aid the Chinese officials could give was ours: permits to photograph wherever we wished—official guides and interpreters—the cooperation of the Chinese Army for our scenes of the Revolution of 1912—and even relaxation of the stringent censorship rulings, so that, instead of having to have all of our film developed and inspected in China, we were able to send the greater part of the film to the studio's own laboratory, where the exacting background scenes could be given the very best of treatment.

By this time our unit had been reduced in strength, as Director Hill and Art-Director Toluboff had been recalled to the studio for other productions, leaving me in charge of the unit. In the following five months, we photographed over 150,000 feet of film, made more than 3,000 still pictures for research purposes, and nearly 1,000 stereo-photographs to supplement the stills, showing every conceivable detail of native life, from native types and costumes to household implements, buildings, temples and even graves. In addition, we purchased over twenty tons of properties, ranging from a complete farm, with house and all equipment (even three water-buffalo!) to costumes, children's toys, and the minutest details of everyday life.

The scenes needed for our picture car-

OUR NEW
Extended Mixing Panel
with intercommunicating phone system
for
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The Toughest Spots
on Land, in the Air, under Water
EYEMO
takes them in its stride

Martin Johnson films animal herds on the African veldt from 1,000 feet up; Arthur C. Pillsbury, naturalist, records the domestic affairs of fishes in the ocean deep; Bernard R. Hubbard, the glacier priest, invades the steaming depths of remote Alaskan craters. The Eyemo 35mm hand camera is *there*—catching every movement in these remote and difficult places of the world. Small and compact enough to be carried anywhere, Eyemo may be operated by spring motor, hand crank, or electric motor. Takes 100-foot daylight loading spools, or may be used with 200- or 400-foot external magazines. Seven film speeds, from 4 to 32 or 8 to 48, including sound speed.

BELL & HOWELL COMPANY

1849 Larchmont Ave., Chicago; 11 West 42nd St., New York; 716 North LaBrea Ave., Hollywood; 320 Regent St., London (B & H Co., Ltd.). Established 1907.

ried us all over China, from the Great Wall and Shantung on the North, to Hong-Kong in the South, and at times, several hundred miles inland. Moreover, we photographed not only in the relatively familiar cities of Shanghai, Nanking, Pekin, Shanhaikwan and Hong-Kong, but also in the country, and in the homes of Chinese of all classes, from the lowliest peasants to Harvard and Oxford educated aristocrats. We even visited a group of the Eunuchs of the old Imperial Court, who let us study and photograph a collection of priceless art-treasures salvaged from the splendors of Manchu Dynasty magnificence.

ASTRO F 1.8 F 2.3
LENSES

for sale by
Mitchell Camera Corporation
665 North Robertson Blvd.
West Hollywood, California

SPECIAL LABORATORY FOR TRANSPARENCIES

Continued from Page 205

In such a machine, a great deal of tubing must naturally be employed to circulate the solutions; for this purpose, most of the chemically satisfactory alloys would have been prohibitively expensive. Therefore we employed a special hard-rubber tubing, of a special composition which left no sulphur or other impurities to contaminate the solutions.

The tanks, themselves, were made of wood, impregnated under high pressure with a special bitumastic compound which rendered them non-absorptive and impervious to photo-chemical solutions.

The machine is driven by air-turbines, which provide the smoothest drive known. Each stage is driven by its individual turbine, so that it is possible to accelerate or retard any stage, independently of the rest of the machine. Provision is, of course, made for automatically taking care of any slack created by such a change; the tension upon the film is likewise variable.

All chemical supplies are naturally tested for purity and consistency, and the obvious precautions of separating all mixing operations from the machine and its tanks are, of course, taken.

It is equally vital that the water-supply be pure: accordingly, in addition to the generous use of distilled water, all water taken from the city mains is filtered no less than five times. First come two large sand-and-charcoal filters; then a further chemical purifier; next, a high-pressure stone filter; and lastly a special filter in which the water is passed through purified, long-staple cotton. In addition to this, all solutions are automatically filtered each time they pass through the circulating system, and accurately "pepped up" so that they are maintained at constant strength and purity. All solutions are maintained at their optimum temperatures by automatic controls which work to a tolerance of less than plus-or-minus one degree, and the temperatures are automatically recorded. We have found that each solution has its most favorable operating temperature; and we maintain these, rather than following the conventional practice of keeping all solutions at the same temperature. The air-supply for both the laboratory itself and the drying-box is from a special air-conditioning plant, which gives us absolute control of temperature, cleanliness and humidity. The humidity of the drying-box can be greatly varied for special purposes.

The advantages of this precise control are shown, not alone in routine operations, though the efficiency of the laboratory has played an important part in the Department's record of efficiency and economy, but in emergencies where special treatment may be necessary for any individual scene. For example, in a recent production we found it necessary to use, for background and other special purposes, some scenes from negative made over eleven years ago. While this film had not been used for making prints, and had been carefully stored in the studio's film-vault, it was, none the less, in extremely poor condition for such use. Not only was it physically dirty, but it had shrunken so badly that it literally would not go on the printer! Yet it had to be used, for it was important to the picture, and would be prohibitively expensive to remake. Therefore, we began by cleaning the film carefully—by hand—with carbon tetrachloride, and, later, with glycerin, to restore both cleanliness and pliability. Then we ran it through our developing-machine several times, passing it through all of the normal solutions—not for any photographic effect, but to restore some, at least, of the moisture which had evaporated during the period of years. In this process, we increased the tension upon the film very considerably above that normally used in routine developing, and raised the humidity of the drying-box to the highest point compatible with getting a dry film. This treatment served gradually to stretch the shrunken film, as it absorbed moisture, until it regained printable proportions. The ultimate result was that we were not only able to produce a print satisfactory for our purposes, but, due to the improved materials, methods and technique employed in our printing, to actually secure a print better than an original print made from that negative eleven years ago.

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Riddle Me This

Continued from Page 203

variety of means for controlling our lights, including diffusing screens, the "flooding" adjustment on many types, and dimmers. Personally, I prefer to compensate my light by "flooding" or "pulling down" the beam, and avoid dimming wherever possible, due to the color-change brought about by lowering the voltage. I believe, though, that a very beneficial development would be the evolution of some means of getting the effect of dimming without the change of color-temperature.

JOSEPH VALENTINE, A.S.C.: I'd like one! In fact, I'd have given a lot for one yesterday, when I needed it very, very badly for some scenes I was making. I don't see any reason why a small dimming rheostat couldn't be made; something with sufficient electrical strength to carry a load of about three thousand watts, yet small enough to be hung right on the camera, and operated by the cameraman. If our equipment manufacturers would abandon their passion for excessive durability and bulk, such a device could, I am sure, be turned out easily: perhaps it wouldn't be as sturdy or long-lived as the present bulky equipment, but it would fill a crying need in present-day cinematography. The multi-plane lamp-filament idea for dimming without changing the color of the light would also be a big advantage if it could be worked out practically.

CHARLES ROSHER, A.S.C.: For such uses, good cinematography makes it imperative that the cinematographer be able to control the light-intensity personally, for it is usually too delicate a matter to entrust to anyone else. For several years I have had a special 500-watt reflector spotlight, which I keep attached to my camera, and manipulate personally. The lamp itself is of the general type of the "Lupe," and made by the Dietz firm: it is a small barrel-type reflector spotlight, and by "flooding" or "pulling down" the light—that is, throwing the light-source in or out of focus—I can get the same effect as dimming but without any change in the color-temperature of the light. In addition, I have a little paddle, something like the ones you use in playing ping-pong, but larger, which I use for modelling the light on faces in close-shots. In close-ups of Constance Bennett, for example, I always used this light on the camera, and, with the paddle, I would shade one side of the face, thereby getting very nice modelling. In a recent scene in another picture, I was making a close shot of Helen Hayes: I used this lamp to light her with, and when several actors were required to pass in front of her, I easily "dimmed" the front-light down to nothing as they passed, by simply "flooding it out" as they went by, and "pulling it down" when they were out of the picture.

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According to an announcement from Motion Picture Camera Supply Company of New York City, that organization is establishing a special department for Coast studios sending units to New York to service these units with every type of accessory needed, such as Mitchell and Bell & Howell cameras for silent, sound and high-speed work; Fearless blimps, Fox velocitators, Mole-Richardson perambulators, camera motors, moviolas and even zoom lenses.

It is believed with this type of service the studios in Hollywood will find it more economical to rent these accessories than to ship them from the coast.

Gerrard Uses New Combination Filter

● On his most recent production for RKO, Henry Gerrard, A.S.C., utilized a new combination filter-diffuser developed for him by George Scheibe, the well-known filter specialist. The combination consists of an Aero 1 color-filter, a .25 Neutral-Density filter, and the Scheibe 1/32 diffusion filter, combined into a single unit. Gerrard states that he used this combination on all of the exterior scenes of "The Fountain," starring Ann Harding, with excellent results. A number of the RKO cinematographers are understood to be adopting this combination.

How We Made the Invisible Man

Continued from Page 201

and we see him at last, as he really is. Upon the screen, we first see only the bed—we are looking straight down upon it from above, and we see the depression made in the pillow by the invisible head, and the folds of the sheets and blankets over the unseen form. Slowly a suggestion of bone-structure appears — then a full skeleton — then slowly traces of flesh—then skin—and finally we see the man himself. This was done directly in the camera. First, we showed the bed, occupied by its invisible patient: the pillow, indentation and all, was made of plaster, and the blankets and sheets of papier-mache. A long, slow lap-dissolve revealed the skeleton (a real one, by the way); another lap-dissolve replaced the skeleton with a roughly-sculptured dummy, which suggested the contours of the actor; and a further series of such dissolves, each time using a slightly more finished dummy, brought us to the real actor, himself. After he had spoken his last few lines, and "died," the camera was moved away — straight up — on a special track which we assembled for the purpose, and a final fade-out ended the picture.

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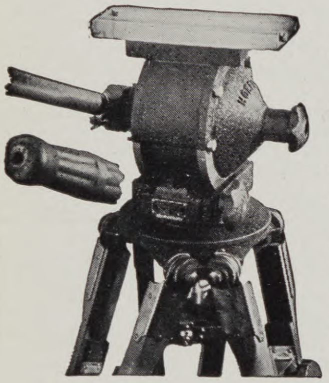

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AMATEUR MOVIES

this issue

- Film Trick Principles
- Cartoonist explains Animation
- Survey of Foreign Cinephotography
- Backyard Movies
- . . . and other features

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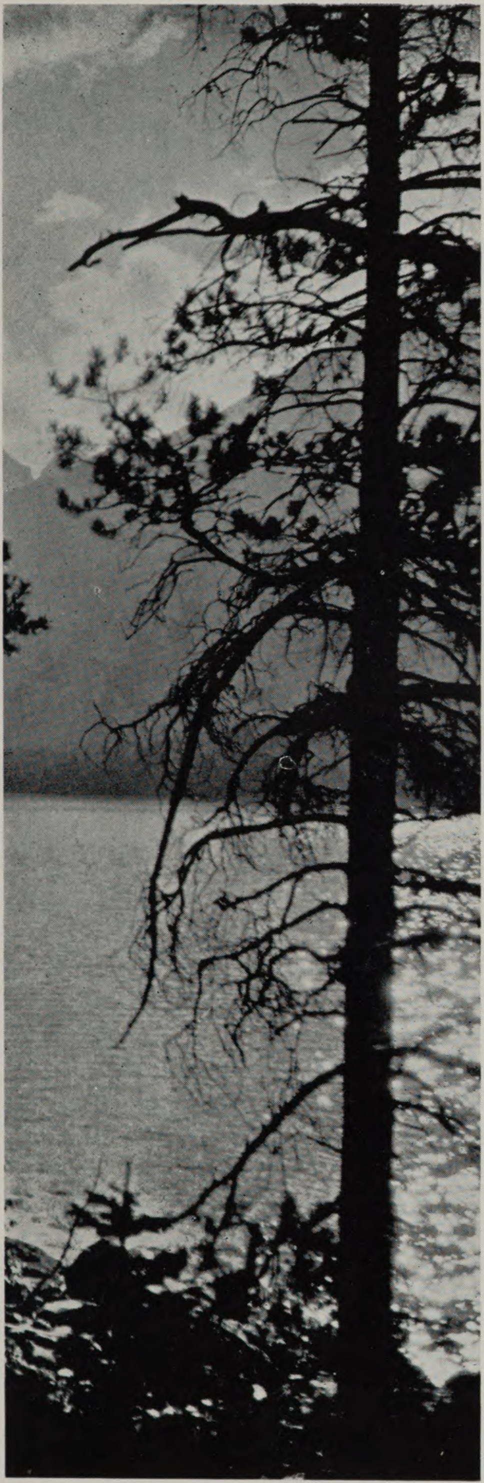

Photo by H. W. Voss

PROFESSIONAL Criticism of the Amateur picture is a part of the service offered by the AMERICAN CINEMATOGRAPHER. Many are not aware of this. Hundreds of pictures have been reviewed this past year by members of the American Society of Cinematographers for the Amateur.

AMATEUR MOVIE SECTION

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Next Month . . .

- Turn to the inside back cover and read of a new interesting monthly contest. Those of you who are technically or mechanically inclined will find something there to warm the cockles of your heart.
- Grace will give you something about lenses in his next month's installment.
- We have worked up a corking continuity; you'll like it. Backyard movies will have another contribution. There'll be a lot of interesting things.

Cinetricks---

IN CONCLUDING the present series of CINETRICKS it is not my thought to leave with my readers the notion that every trick possible with amateur cine cameras has been discussed. The scope of trick work in motion pictures depends on the ingenuity of every individual worker and the equipment he has at hand, and to list in 1-2-3 fashion even the many tricks known to have been used until this very moment would be to hand to the printer of AMERICAN CINEMATOGRAPHER a list obsolete before he could set up the type.

Besides, as you may have discovered already in reading this CINETRICKS series, the articles have been kept general in nature for an obvious reason—it hasn't been my idea so much to pick out and discuss a number of actual tricks as to discuss the underlying principles of certain types of tricks in the hope that your ingenuity would be challenged sufficiently to work out your own individual applications.

In order to furnish still more incentive to work out your own applications to the tricks we've been talking about and those we haven't mentioned yet, this magazine will shortly announce a contest with prizes for original and striking applications of tricks. But perhaps I've let the cat out of the bag, so we'll wait for further announcements

Now to a summary of the tricks discussed so far. In the first of the CINETRICKS series, appearing in the May issue of this magazine, we talked about the reasons for taking motion pictures at other than the normal speed.

Amateur motion pictures are normally taken and projected at a film speed of 16 frames per second. Whether we take pictures at a slower or faster film speed makes no difference to the projector, for it grinds them out at 16 frames per second thruout the reel. If we wish to show action, then, at a different pace than normal, we must adjust the speed of our camera.

Subnormal camera speeds are used when the projected picture is to show the action faster than normal; supernormal speeds show the action slowed up when projected. Because our projector is always (or should be) run at the normal speed constantly, a camera speed the inverse of the desired screened action must be selected If we want to screen a running horse apparently running one-fourth his actual or normal speed, it must be filmed with the camera running four times normal speed. If, for comedy or other effects, we want the screened action to be twice as fast as normal, the camera must be run at half speed. In short, we must film at a speed inversely proportional to the speed desired for projection.

A supernormal speed is generally used for slowing down the motion of the subject so that its action may be observed at a pace which our eyes can easily follow. Slow motion is quite extensively used to study the movements of athletes and animals because it is the only way our eyes can catch or detect flaws in a swiftly-moving subject. The same is true of detecting the flaws in some high-speed mechanical motions which would not develop at a slow enough speed for the human eye to follow.

In nearly all miniature motion picture work the camera is run at supernormal speed because the illusion is thereby considerably heightened. The larger an object is, the more slowly it moves, so a miniature must be so photographed that the miniature moves (on the screen) at the speed the large original would move. For instance, a real yacht might rise and fall in a storm at sea in four seconds, whereas a two-foot miniature reproduction would rise and fall in a "storm" in a tank in one or one and a half seconds. If we slowed down the miniature shot so that the screen time was exactly four seconds, the miniature would act exactly like the original yacht. The same applies to miniature railroad trains. If a ten-car crack flyer takes 14 seconds to pass the camera, the ten-car miniature reproduction of that train should also take 14 seconds of screen time to pass the camera. If we find that the miniature actually takes only 3½ seconds to pass, we must run our camera at 14 divided by 3½, or 4 times normal speed.

A slight supernormal speed, say 24 or 32 frames, is sometimes also found useful by the amateur in eliminating blurring of moving objects because of the faster shutter speed. This is, of course, only necessary where the shutter opening cannot be varied. Another use of 24- and 32-frame speed is to smooth out panorama shots, especially if the camera is hand-held.

Subnormal speeds of 12 and 8 frames per second are used usually for one of two reasons—to speed up action for comedy, or to get sufficient exposure under poor light conditions. If subnormal speeds are used because of poor light, caution your actors to go thru their pantomime at a proportionately slower speed than normal, else the screen effect will be ludicrous. It is possible, with supersenitive film and an f1.9 lens, to cinephotograph, in an otherwise completely dark room, a person lighting a cigaret, and if the subject moves half as fast as he normally would, the scene, shot at 8 frames, will be sufficiently exposed.

Altho usually regarded as a separate phase of motion picture work, single frame or animation cinephotography is really only a special case of subnormal speed. It's easy, yet often the easiest of tricks can "make" your picture.

One more thing—don't forget to compensate for the increase or decrease of exposure when making pictures at subnormal or supernormal speeds. Just remember that each stop on your lens means an increase of 50% from one opening to the next larger (the smaller the f number the larger the opening, you know). For instance, the normal speed requires an opening of f6.3. You want to take it at half speed. Close the lens down to f11 and the film will be correctly exposed. If you want to shoot at 64 frames, open the lens to f3.5. If you are using a camera with variable speeds, however, you'll find all this calculation worked out for you on a dial. Also, your exposure meter will instantly indicate the correct opening no matter what your film speed.

Because no one has so far come forward with a laboratory printer on which the amateur can do trick work in 16 and 8, the amateur finds it necessary to resort to a simple trick if he wishes to make movies showing a subject acting in reverse. This simple trick consists merely of holding the camera upside down while filming, and then cutting out that shot and splicing it back in end for end after development. We won't go into the explanation of this feat—refer to the CINETRICKS article in the June issue.

If you will recall, we showed one trick which was made with a knife-throwing sequence by this reverse film travel trick. This, of course, is but one of many such tricks you can use. Another might be something like this: You are on a fishing trip and have caught a "big one" but didn't get a movie of the actual strike and haul-in. That's easily enough remedied. Put the big boy back on the hook and throw him back in, filming upside down. Reversed end

Principles Underlying Film Tricks

by

Wm. J. Grace

for end, the scene will be just as convincing as the real one would have been.

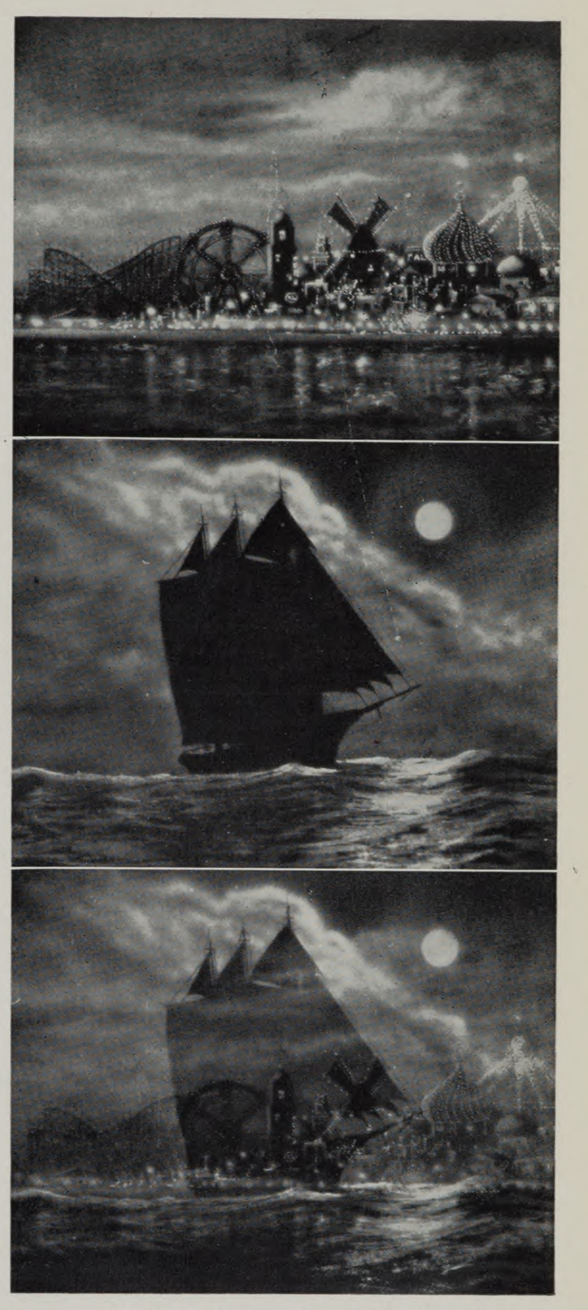
Reversed film travel shots are often used in making trick titles. Suppose you are making a main title for your reel of that seashore vacation and decide to let the ocean waves spell the title. Obviously, ocean waves are difficult to train to spell, but by a little reverse action we can make it look as if the sea had really gone to school. Pick out a smooth spot on the sandy shore where little waves will wash in. Build a low dam to keep out the water and write on the sand with a stick the title you want to use. After getting it to look just right, set up the camera upside down and wait for an incoming wave. Just as you see a good wave coming in, have an assistant quickly tear down the dam and start your camera. The wave will come in and cover up the title drawn in the sand.

Projected after being turned end for end, the title will start with clean sand, and a wave will wash up on the sand and then recede, leaving the title exposed.

Whether you own a camera equipped for rewinding film in the camera, whether you have your regular camera equipped for such work, or whether you work out simple schemes that require no rewinding, by all means use double exposures plentifully.

Double exposures are widely used and appear in many forms from the lap dissolve and wipe-over to the multiple exposures which show the same person four times in the same picture doing four different things. One of the most cleverly worked out examples I've seen recently of multiple-exposure work is the Paramount short which shows a musician playing four different stringed instruments at one time, the screen picture showing the same man with a different instrument in each quarter of the screen.

There have been numerous professional examples of an actor talking to himself. Of those which I can recall at the moment are the picture in which Frederick March was his own twin brother and the picture in which Ruth Chatterton was her own daughter. In each of these pictures the timing was probably considerably aided by the sound play-back, but the amateur can equip his camera with an accurate frame or footage counter and means for accurately rewinding film in the camera to get the same excellence in results.



At top, first scene photographed. Then camera is turned back and center scene photographed creating the lap at the bottom with the picture of course lapping again into the center scene of the boat.

There are certain things which are ordinarily made by double exposure which can be made quite well, however, by other means. A moving background for titles can be made by lettering the title on glass and shooting thru the glass to include the desired background. The focus, of course, is on the lettering.

Unless you have means, however, for rewinding film in the camera and accurate footage indication of some sort, it would not be wise to attempt double exposure work which is too involved. This advice is offered in the spirit of friendly advice, not as a sales talk for my own equipment designed for the purpose. Nor is it necessarily intended

Continued on Page 235

Digging for Buried Treasure

by

Louis A. Inserra

MANY suggestions in our Backyard Movie Contest came to us on the idea of "Buried Treasure." However, the completeness of Inserra's story prompts us to give it the place of our usual monthly continuity.

Cast of Characters

Father ....
Jimmy, his son ....
Four or five of Jimmy's playmates ....
Spotty, the family dog ....

Scene 1. Long-shot of a backyard. On the left side of the scene is Father sitting on the porch steps reading and smoking. On the right Jimmy and his playmates lie on the grass. Jimmy is reading aloud from a book.

Scene 2. Medium close-up of the boys. Jimmy waves his arm frantically as if enacting a battle scene he is reading.

Scene 3. Close-up of Father as he shakes his head slowly and smiles at the boys. (Be sure Father looks in the right direction!)

Scene 4. Close-up of Jimmy reading a pirate book. Suddenly, he stops and a far-away look comes into his eyes. An idea dawns on him and he turns to the others excitedly, and speaks:

TITLE: "Let's play pirates!"

Scene 5. Continue Scene 4. Pan slowly over the group as the idea is accepted unanimously by each boy.

Scene 6. Medium long-shot of boys. They rise and disperse in all directions to their homes.

Scene 7. Close-up of Father as he watches the last boy disappear from view. He smiles and is about to resume his reading when, peering over the newspaper, he spies something on the ground to the right and well behind the camera. It holds his attention for a moment, and then his gaze slowly travels from right to left of the picture as if following some moving object. His gaze stops, and he shows signs of impatience. Some dust-laden air drifts into the scene as he closes his eyes and turns his head aside. (Clean your lens carefully after this shot!)

Scene 8. Medium-shot of Father as he rises to dust himself.

Scene 9. Close-up as he finishes dusting himself. Suddenly, he smiles as he gets an idea. He looks at the spot where the boys were last seen and then to his right whence the dust had come. FADE OUT.

Scene 10. FADE IN. Close-up of Father's hands tacking a piece of paper to a tree trunk. FADE OUT.

Scene 11. FADE IN. Long-shot of backyard. Father has resumed his reading. The boys enter the scene crudely dressed as pirates. Jimmy wears golf knickers, another boy a pair of shorts, still another his mother's half-century-old hat. As Jimmy enters, he slips, falls on wet ground, but rises again.

Scene 12. Brief close-up of Father snickering at the nonsensical costumes just displayed.

Scene 13. Pan close-up of each boy's costume.

Scene 14. Long-shot of backyard showing porch steps and tree trunk with note attached. The boys begin "playing pirates" with Father often glancing up from his reading.

Scene 15. Medium-shot of Jimmy struggling in a hand-to-hand encounter. He spies note tacked on tree and stops fighting.

Scene 16. Close-up of Jimmy's puzzled face as he looks up at the note. He waves and shouts to the others. (Take this shot from behind the tree looking down at him. Have a portion of the note paper appear in the picture.)

Scene 17. Close-up of Father as he grins and steals a glance at the boys.

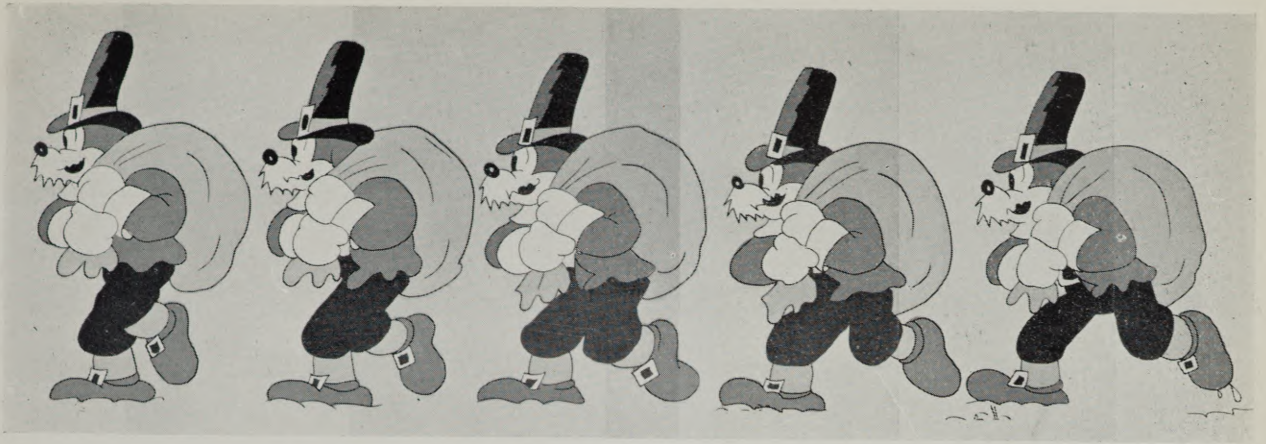
Scene 18. Medium close-up of the boys crowding in as Jimmy points to the note. (Shoot over Jimmy's shoulders towards the note so as to prepare for an insert of note.)

Scene 19. (INSERT) Very close close-up of note reading in crude printing: "Ho, my lads! There is hidden treasure. Solve the secret of this letter for the hidden treasure map, but—beware, for he who misses shall die!" The note is signed, "Bluebeard, the pirate," with a picture of a skull and cross-bones drawn beneath the signature.

Scene 20. Close-up of Jimmy and the frightened boys as he tears the note down.

Scene 21. Close-up of one small boy as his eyes water slightly. (A few drops of water will do the trick.) He doesn't favor this pirate game anymore.

Continued on Page 234



Let's Try Animation

by

Walter Lantz

Head of Cartoon Dept.,
Universal Pictures Studio

ANIMATION is the art of photographing inanimate objects—drawings, dolls, models, and the like—on motion picture film, exposing only one or two frames at a time, moving the object between the exposures, so that, on the screen, you have the illusion of seeing the actually inanimate object in apparent motion.

Many amateur cinematographers have asked me if animation can be done with home-movie cameras. Of course it can! Some cameras—like the Simplex, the new "121" Filmo, and the Cine-Kodak "Special"—are provided with automatic single-frame movements; others, like the Victor, have auxiliary hand-cranks, which can be geared to expose but one frame at a time. Even cameras which don't have these features can be used for animation, if you practice enough to get a light touch on the release-button, so that you will only expose one or two frames with each touch.

The most familiar form of animation is seen in animated cartoons: it is quite possible for any amateur to make his own cartoons, if he can draw—or collaborate with somebody who can. But cartooning isn't by any means the only type of animation: you can get very interesting animation effects with dolls, toy animals, and the like. This is easier for the amateur filmer, since no drawing is required: and, best of all, it is virgin territory, and offers a chance for making really "different" films.

All you will need for such pictures will be dolls whose arms and legs can be moved, but with joints stiff enough so that, once you have moved them, they will remain in place. If you want to, you can build little sets for your dolls to "act" in (a doll-house is often convenient for this), or you can have your dolls move around in a normal room, in your yard—or anywhere that may fit your sequence.

The principle of animation is the same, whether you are using drawings or dolls: if you want smooth action, use many intermediate positions (or "phases of motion") between the beginning and end of any action. Make these phases close together, so that there is relatively little difference between one frame and the next. This will make the movement flow smoothly; if you want it more jerky, us fewer intermediate stages. For fast action, use one frame per phase; for slower action, increase the number of frames per phase.

The illustrations may help to show how professional animators space their drawings. The drawings are taken from a recent Universal "Oswald" Cartoon, and show the drawings used to make a single step. Beginning at the right end of the strip at the top of the page, we see the left foot just being lifted from the ground, and by following the action in both strips from right to left, we can trace

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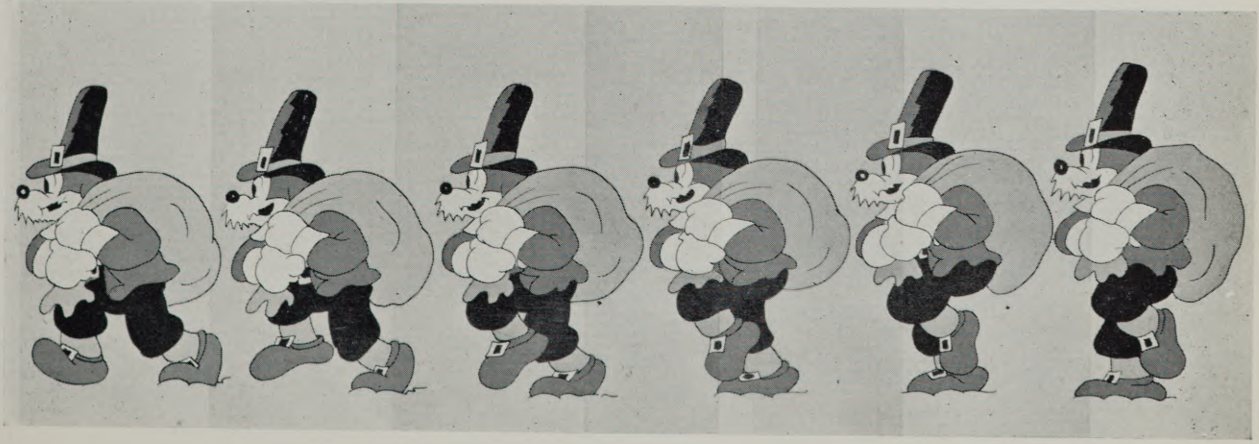


The Miniature

A LIFE full of adventure has been the lot of the miniature camera. It has tracked wild animals in the jungle, has soared over land and sea and ice, has attended important athletic events and has recorded human drama in its many phases, even inside the court room. Now I am able to testify that it has had a college education. For over a year my Leica and I shared many adventures on the campus of a very small and yet very famous college for women at Claremont, California.

My four years at the above college had been unaccompanied by such a true friend as my camera. Therefore, at graduation time of the year following I, proud possessor of a Model D Leica, decided that it was high time for it to acquire a college education. Since I knew little about the operation of the camera with the exception of these two very meager suggestions, (1) take pictures out-of-doors in the sun at f6.3 at a hundredth of a second, and (2) interiors should be given about a second at f3.5, I thought it high time that I acquired a little further education myself.

There were three opportunities to employ my camera during the last three days of the college year. Wednesday night there was a water pageant at the open-air swimming pool. For it I used formula (2), above. Thursday afternoon at the college's colorful garden party I employed formula (1). The grand stroke was yet to come. I trembled in my boots, for I had had a fearful time getting permission from the authorities to photograph each senior as she received her diploma at the graduation exercises. The small size of my camera and my promise to keep it hidden from view finally won out. Friday afternoon, then, after photographing all of the girls and all of the professors as they marched to the scene of the ceremony, I ran to my seat inside the auditorium. In the nick of time I changed to some supersensitive film and set my Leica on its tripod, screwed on the cable release and prayed that formula (2) would work. It did, at least, part of the time. In three days I had taken around three hundred pictures. The summer was spent mailing out enlargements to proud parents and girl graduates.

In September, then, my camera and I attended school in earnest, for by this time I realized all the tremendous possibilities that lay in the camera. Even I, a girl, could learn to put them to work. College proved a miniature world whose limited yet greatly varied phases of activity I could learn to photograph. Most of the people and events there were literally on the jump. There were the college dances, teas, tennis, swimming and diving, riding, hockey, plays, pageants, dance festivals, club meetings, convocations, dinners, and not least, classes. I tried also architectural studies and somewhat later, portraits. The buildings were calm in all their beauty, but the portrait subjects, although beautiful were as jumpy as everything else. Most of the portraits were snatched on the run between classes and term papers and dates.

After I had been experimenting for about two months upon every occasion the college had to offer, trying to enlarge my pocketful of formulas for successful pictures, some of the senior girls came to me and said, "Nina, the senior class is considering having you take the portraits for the Annual. Have you any samples that we could show them?" I thought fast, because portrait photography and I were hardly on nodding terms. (In fact I did not know what a Photoflood was and had made but two attempts at portraiture with ordinary 60- and 100-watt lamps.) In spite of my limitations I told them that I would bring them some enlargements immediaetly. My first attempt was put on a charcoal paper which helped. The second "portrait" I had tried was with the 1.9 lens. It had a pleasing portrait quality and enlarged sharply to an 8 by 10. Evidently the girls liked these, for when they took the vote, I was in for it.

The portrait "studio" was a vacant room in one of the dormitories. In the beginning it seemed quite adequate, but towards the end of the school year it was continually cluttered with a maze of lamps, callers, electric cords, pictures, cameras, and everything else that finds its way into a camera amateur's work room. Furthermore, there was all the furniture of the room. I could not throw it out. Usually the bed, dresser, desk and chairs were covered with girls. Sometimes I did throw the girls out when there was serious portrait work to do.

At first I used two lights for "portraits" but gradually learned to manipulate four or five, often tripping over the cords, it is true. I started with the 50mm lens but later came to the conclusion that a telephoto would do the trick much better. I tried the 135mm and the 90mm, finding them both excellent. All my portraits were taken with the camera on a tripod with the exception of the very last ones which were taken with f2 lens. They certainly have something that the others lack, some indescribable quality that gives them more reality and at the same time more beauty.

Camera Goes To School

by
Nina Brownrigg

In general the exposure with the 90mm was f6.3 at a fifth of a second, although I often used f4.5 at a twentieth. The pictures with the caps and gowns were the most difficult. Mortar boards are so beautifully becoming, I decided. However, I had a chance to do a portrait of most of the girls in the school. What fun it was to try to bring out their beauty without sacrificing their characters, if that order is possible, especially when they gave me about five minutes each in which to do it. The portrait adventures were good for Leica and me, for besides adding slightly to our technical knowledge, we learned a little more about human nature.

Sometimes I was called upon to leave my "studio" in order to pursue the task of photographing the rooms of some of the girls. Since the rooms were so tiny, I always put the wide-angle lens to work. With its excellent depth of focus, f3.5 turned out to be a perfectly good stop. For these pictures one Photoflood lamp in a wide reflector which I waved around during the short time exposure was sufficient. The room pictures always turned out sharp and clear and were sent, no doubt, to parents in the East to show them what comforts their daughters were enjoying in a California college.

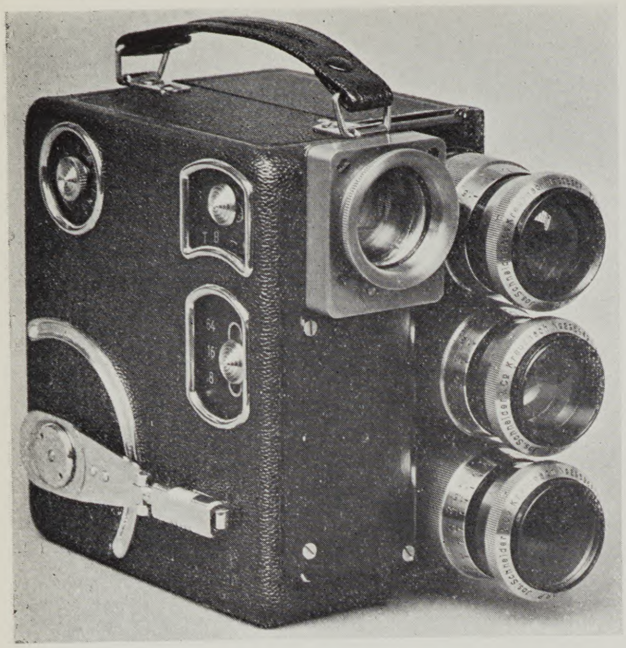
Besides all these portrait and room picture adventures, my Leica and I attended every possible college function. Sometimes we were popular at the formal dances, and sometimes we were not. That all depended. Anyhow we managed quite a few good "candid camera" pictures. On the athletic field there was always adventure in plenty of action. We had other adventures too, in snapping girls intimately at meals, on the campus, talking to professors or enjoying a cup of tea which is a daily informal institution. One day I gave the whole school a start with a borrowed 1.5 lens. The process was very simple but not to be recommended upon every occasion. I would open the door of a class-room, click the picture, close the door. Later with more nerve I would take a seat at the back of the room and shoot the professors in their most characteristic poses during their lectures.

During the year the girls gave several excellent plays and a very ambitious dance-drama. These were the most fun of all to photograph. Usually Leica and I sat in the front row with our tripod. I became rather expert at judging just when the characters might be still long enough to allow a short short-time exposure at f3.5. It was much more sport than using the 1.9 lens although the latter had its advantage in that it gave me close-ups. Later I used the f2 lens and found that it is all that could be desired. This year's diploma pictures with the f2 are all good.

Photography became quite popular at the college last year. A flock of cameras from Univexes to 16mm motion picture cameras sprang into action around me. One evening we had a show for the Scholarship Fund. There were 8- and 16mm movies and many, many Leicas still projected. Due to the success of the show I decided to have positives made of all of my negatives from then on. The projected pictures helped enormously as far as portraits were concerned. Whenever I announced a show of some new pictures, the girls crowded into my "studio." Then I was tempted to go into the moving picture business but only managed to take 300 feet on 16mm film at graduation time along with Leica pictures. Needless to say the college Annual was plastered with "candid camera" pictures. The remaining ten percent were taken by one of the senior girls. And so Leica and I skipped blithely from one school adventure to another. Sometimes we profited from bitter experience and other times we did the same wrong things over again, but there was always something new to try

Another adventure the camera and I had at school consisted of learning to use the copy attachment. Before long we were copying maps, diagrams, graphs, plans, sketches, and photographs for term papers and theses.

That brings up the subject of my protege, or rather protegee. Her first experience with a miniature camera consisted of photographing insects for her Biology project. With the aid of the copy attachment and tubes and under my supervision she obtained a remarkably good collection. Now she has run away from school into the world of greater adventure with her new Model F Leica. I hope that she has as much fun in her camera adventures away from school as I had when I took my camera back to school.



A k6mm Seimens camera, made in Germany. Note the 3-lens sliding turret.

Survey of Foreign Cinephotography

by

Arthur Campbell, A. S. C.

TAKING into consideration the population of some of the foreign countries compared to the United States, great things are being accomplished by the foreign Amateur Cinephotographer. Perusing most of the foreign-language periodicals one cannot help but notice the attention being paid, even by official government bodies, to the substandard film for its educational and commercial importance.

Great Britain seems to lead all other countries, 16 and 8 mm being the most widely used medium. However, the French 9.5mm has quite a few adherents. Much is to be said for and against either mentioned size; however, 16 and 8 mm seem to be by far the most popular. In spite of the great number of domestic cameras and projection machines built there, American cameras still reign supreme.

Outstanding is the great number of clubs and associations for substandard film. The Institute of Amateur Cinematographers may be considered one of the largest and most important amateur organizations in the world, patronized by the very elite of aristocracy and commoners alike bound by their common hobby. Their annual contest is the most important event in the year and their awards highly coveted. Every town seems to have a cine club and since competition is the spice of things, everybody is trying to outdo the other.

A survey of most of the entries for this contest proves that amateurs are very much alike all over the world. The subjects vary but the great majority consist of travel films, family and baby incidents and the more elaborate playfilm. The quality also varies greatly, proving clearly how much more there is still to be done in the educative field to teach amateurs how to shoot their little film clean and economically. The IAC Bulletin and several other well-informed cine papers are doing excellent work in that respect.

The camera being practically the base of photography, or the one piece of equipment in which the amateur takes the greatest interest and pride, it might be well to review briefly the cameras and types of cameras available to the British amateur.

A very popular and efficient camera is the Ensign Kinecam, in some respects resembling the Bell & Howell in construction, equipped with a 3-lens turret. Stock cameras come equipped with such fast lenses as f1.5 and f2.8.

An interesting camera is the Midas camera and projector combined. This camera is operated by dry cell batteries even for the taking of pictures. It has the single-lens mount system and is made only for 9.5mm film.

For the advanced amateur who is interested in sound on 16mm there is the Marshall camera. It is the single recording system type and is used largely by professional 16mm cameramen.

Film is available to the British amateur in many speeds. A marketing method strange to America is their offer to sell reversal film with or without developing privileges. The amateur may buy this film at a slight discount and try his own hand at developing and reversing. Naturally the negative and positive system is widely used in Britain, especially by those who desire to do their own developing and printing.

The exposure meter is widely used and more and more amateurs are starting to use filters intelligently.

Prices for raw stock, etc., and camera equipment do not vary much compared to the United States. For economic reasons the 8mm is becoming more popular.

FRANCE: France as the Birthplace of Photography has universally adopted Amateur Cinephotography. And with true Gallic temperament the average amateur uses his substandard camera as a means of expressing and fixing his more or less artistic talents. As the home of the 9.5mm it naturally has quite a large number of users. However, we shall not endeavor to discuss the relative merits of the different sizes used. The French next to the German takes his amateur cinephotography with extreme seriousness.

The acted amateur playfilm dominates all other subjects. The reason for this is that there are so many amateur dramatic societies which have converted themselves into cine clubs. What they lack in technical knowledge they make up by their enthusiasm. Great stress is laid upon emotional and sentimental subjects suited to their psychology but perhaps a bit too melodramatic for Anglo-Saxon taste. The very beauty of their countrysides with their

Continued on Page 232

George Lancaster, A.S.C. with an improvised dolly converted from a towing dolly to a camera dolly for the occasion.

Cameraing Through Yellowstone

by

George J. Lancaster, A. S. C.

LONG LOG houses; low log barns with straw spread on the roofs; streams with leaping fish; to the east are the jagged peaks of the Tetons, loveliest of mountains.

To me the most interesting thing about the Yellowstone is its variety. Here one may photograph the Yellowstone River battling its way through gorges, or the Madison dimpling in and out of the sun and shadows, or the Fire Hole placidly rippling over the warm lava beds, or see the Emerald Pool, the Grotto Geyser spurt forth, or Old Faithful send high into the air steam and water every hour just as regular as clockwork. Or to see the waters tumbling over the falls at the Canyon; the sides of the canyon running in riot of color of all shades and hues of the spectrum. Or to see the bears, deer, elk, and moose feeding in their meadows along the trip from lodge to lodge. Once in the Yellowstone, all you have to do is follow a nature guide around the park.

What a place to set up a camera, a photographer's paradise, I calls it, by gosh. Here one should use his color outfit, if he has one, or have a supply of filters on hand.

My hand tests showed that the light is very fast due to the high elevation and the rarity of the air. Normally if one was in the habit of stopping down to f.16, in this region it would be safe to stop to f.32. But if it is desired to use heavy filters like the "G" to emphasize white clouds and to darken the sky, allowances must be made for additional opening of the diaphragm, back to f.16. Here one will find the use of the 5N5 and 3N5 filters to neutralize the sunlight and shadows found in practically all scenic set-ups. A 23-A filter is very effective when one is set up photographing the geysers in action; this filter will neutralize the white spray and lime-like cone surrounding the vent of the geyser. On all geyser set-ups I highly recommend a three-quarter light, which will give beautiful composition in highlights and shadows, with the lodgepole pines in the background, while overhead one will see huge snow clouds gathered intermittently in a topaz-green sky.

Following the Fire Hole River to Madison Junction, one will encounter rapids and waterfalls foaming over the jagged rocks. Here it is suggested to use the 3N5 with an O-A glass. In the Fire Hole canyon the sun never lights up the whole of the landscape, thus it will be seen that either side of the canyon will be in a shade, while portions of the white, tumbling, foaming waters will be brightly illuminated. The 3N5 will compensate the highlights and shadows, while the O-A glass will diffuse slightly the sharpness of the landscape, giving a sort of soft focus effect, and also produce an effect like diamonds jumping and glistening in the water.

At Madison Lodge one will see a formation of lime and chalk, a growth from the algae animal life. The Terraces are queerly shaped, giving effects of icicles, great buildings and ancient Roman structures. This is hard to photograph because of the flat light that strikes the front, sides and top. To accentuate the detail it is necessary to dampen down, so to speak, the crevices and indentations of the formations. By using the combination 56-72 filter and supersensitive film one will secure good results, the very bright spots will be subdued, while the parts that have a tendency of casting shadows will produce gray-tones of all shades.

At the bear feeding grounds and photographing other scenes it is suggested to use the No. 25 neutral filter at all times. Surprising effects will reward the 16mm photographer in his endeavor.

Panning and tilting will be necessary in some of the set-ups. To obtain steadiness in movement a tripod is absolutely necessary. Nothing is so distracting to the eye while watching the subject on the screen as a wobbly camera giving the effect of being on the high seas in a row boat. No matter how good the subject may be, if any of the scenes are wobbly the whole effect is lost.

Lastly and most important of all is the care of the camera. Considering the compactness of the mechanism and other mechanical appliances incorporated, one must take care of the camera. During the night the atmosphere becomes dry and extremely chilly. The oil in the camera will stiffen, perhaps you will not be able to make the camera operate. Do not become alarmed. Open it and let the sun thaw it out. At night remove the lens, wrap it in a handkerchief and place it in the camera case, leaving it out in your car over night. Never take a camera lens into a warm room as it will immediately start sweating when taken out in the cooler air like that found in this region in the mornings.

WHEELS OF INDUSTRY

Recent Photograhic Books

● In the Practical Photography Series published by American Photographic Publishing Company and authored by Frank R. Fraprie, F.R.P.S., three books come to our desk bearing the titles, "The Secret of Exposure," "Practical Retouching," and "How to Make Lantern Slides."

The last book is seemingly in its first edition. "Practical Retouching" was first copyrighted in 1907. The present edition indicates that more than forty thousand copies of this book have been sold. "The Secret of Exposure" was first written in 1906. Since then it has had seven reprints with a sale that ran as high as twenty-four thousand copies. These books have been revised many times to bring them up to date. The latest revision made was during the current year.

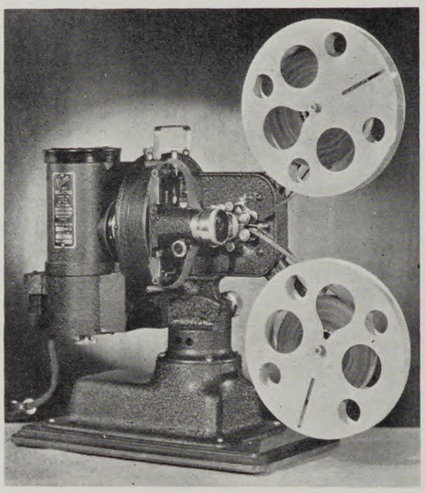
Special Leica Camera Model

● The new model FF Leica is being announced by E. Leitz, Inc. The model FF Leica is basically the same as the model F excepting that the film capacity is 33 feet (enough for 250 exposures) instead of a little more than 5 feet in the regular Leica (giving up to 36 exposures). Aerial photographers will welcome this new model, for it eliminates the need for reloading after every 36 exposures. Natural-color photographers will find it of value in their work, for it permits a greater range of pictures to be made without opening the camera. It is likewise useful to press and candid photographers, for often they are required to make a complete series of pictures in rapid succession without time to re-load shorter lengths. For copy work, the model FF is without a peer, for its film capacity permits the copying of many pages successively without interruptions.

The new Leica model possesses all the features of the model F Leica, slow shutter speeds, magnified range finder, etc. Two film magazines are used, thus making it unnecessary to rewind the film back after exposure. Any of the Leica lenses are interchangeable on this model. Accessories include an Eveready case, special film trimming guide, and spare magazines.

New Victor Projector

● Victor announces a new projector to be placed on the market very soon employing a 750-watt lamp. This will be a counterpart of their Hi-Power projector which has been using the 500-watt light.



It is expected this new 16mm projector will be ready for the market within the month.

New Miniature Camera

● The newest foreign-type miniature Kodak, which takes sixteen pictures, 1⅝ by 2¼ inches in size, on an eight-exposure roll of 620 film, has just been put on the market by the Eastman Kodak Company.

The sixteen prints from a roll of film exposed in the Kodak Duo Six-20, as the new camera is called, are large enough for an album, a letter, or a pocket. The availability of Panatomic Film, with its fine-grain characteristics, in the 620 size for use in the Duo Six-20 will accommodate also photographers who wish to make sizable enlargements from their negatives.

The Kodak Duo Six-20 is compact for a camera taking pictures of the size described, its longest dimension being less than that of a Vest Pocket Kodak. Like the Kodak Vollenda and the Kodaks Six-20 and Six-16, the front of the Duo Six-20 springs into rigid picture-taking position at the touch of a button.

The Duo Six-20 is equipped with a Kodak Anastigmat f3.5 lens and a Compur shutter, which are set in a spiral focusing mount controlled by a lever. The lens is of 7cm focal length. The shutter has eight speeds, ranging from 1 second to 1/300 of a second, with bulb and time.

The red windows have a slide cover for light protection when panchromatic film is used. There is a collapsible direct-view optical finder, besides a depth-of-focus scale.

New 16mm Color Process

● From England comes word of a new natural-color process for use in any 16-mm camera or projector. Known as "Dufaycolor," it apears to be a subtractive process, and is backed by many figures well known in British photography. The use of the process does not appear to be restricted to cameras fitted with fast lenses, or to high-powered projectors; the manufacturers state that satisfactory pictures have been made with it under the most adverse weather conditions, and with ordinary equipment.

Quoting further, the manufacturers state: "A filter is used on the camera when taking 'Dufaycolor,' but it is a simple, inexpensive, one-color filter. The film is a reversal film, and when it has been processed, the colors are in the film itself, and can be examined when holding the film in the hand. Because the color is inherent in the film, no filter is necessary in projection."

The process is stated to be the result of twelve years' research, and to be backed by many of the leaders of the British photographic industry. The price quoted for the English market is only slightly higher than that of ordinary reversal films. It is not stated whether the process is to be introduced into America.

Goerz Lens Catalog

● The C. P. Goerz American Optical Co. has just issued their latest catalog of lenses and photographic accessories which that concern manufactures.

In addition to their wide line of lenses for still, 16mm and 35mm movie cameras they also list such interesting things for amateur movie-makers as direct focusers for filmo cameras. This device permits focusing directly through the lens in taking position. It is applied to lenses of 3" and greater focal length. Also the effect device and mask box will prove of interest to advanced amateurs.

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BACKYARD MOVIES

● You'll recognize in both contributions to Backyard Movies this month two very fine suggestions, constructive and mighty useful to practically every cinephotographer.

THE UNREAL NEWSREEL

Recently I decided to rid my dark room of some fifty bits that I had deleted from my films during recent years. In looking over these shots, the thought occurred to me that I could weave some of them into amusing plots by adding a scene or two here and there.

I decided to assemble from this hodgepodge of film, a burlesque newsreel. The "newsreel" items were presented with titles after the fashion of present-day newsreels.

For example, I found in my collection a shot of a group of people scurrying out of the dusty propeller-wake of an aeroplane taking off just out of scene range. Still another shot showed a male member of the family frantically taking clothes off the family wash line and stuffing the clothes pins in his mouth—a scene playfully taken a few years ago in order to use up a few remaining feet of film. There was another shot showing floodwaters of a rainstorm that occurred some years ago, flowing down a city street carrying debris before them.

These scenes were laid aside. After the main title of the "Unreal Newsreel" was spliced, the subtitle: "Punkin Center, Iowa. Cyclone Strikes Village, Wreaking Havoc."

Then the rescued scenes were assembled as follows:

Scene 1. Shot of people scurrying out of propeller wake. This gave the appearance of people running for shelter in storm.

Scene 2. Made special shot of fast-moving dark storm clouds in sky.

Scene 3. Shot of man taking clothes from line, apparently fearful of approaching storm.

Scene 4. Shot of torrential rain falling, made specially to link up the sequence.

Scene 5. Shot of swirling storm waters, referred to above.

Thus I had a complete sequence made with the three discarded shots and two specially-made shots.

Movie Film Free

These two contributors received each a 100-ft. roll of 16mm panchromatic film. Send your suggestions in, you may also win a 100-ft. roll of film free. The main thing is the idea. Something that practically every amateur can make. Something not too difficult and something that does not call for special investment other than film. You do not have to send it to us scene for scene unless you want to. Just let us have the plot in your own words.

Another newsreel item was made from discarded and special scenes as follows: Subtitle, "San Pedro, Calif. Rare Animals Arrive from Borneo for Griffith Park Zoo."

Scene 1. Medium-shot of ocean freighter unloading at docks.

Scene 2. Medium-close shot of caged baboons taken at zoo.

Scene 3. Medium-close shot of my wife playfully imitating a caged monkey behind a garden grill-work.

Subtitle: "A rare specimen of Dam-sel captured after a strenuous 24-hour battle."

Scene 4. Continuation of Scene 3.

Scenes 1, 3 and 4 were selected from the discarded group. Scene 2 and titles were added and an amusing sequence resulted.

Amateurs looking about for something new to film will find making an "Unreal Newsreel" amusing and a test for their ability to improvise and develop plots, and at the same time save costly footage that might otherwise be discarded.

ARTHUR E. GAVIN.

"WHILE THE EARTH REMAINETH"

● Did you ever come face to face with a stone wall, as it were, in selecting a title for your next picture? One that would provide a wealth of material and required no elaborate set-up? A movie that included, when completed, many scenes taken while touring or right in your own home or neighborhood? Well, such a problem confronted me when my last four-hundred-foot reel was finished.

Memory came to the rescue and "While the Earth Remaineth" will be placed in production. It came about in this way: Years ago, there hung in the living room at the old farm an imitation oil painting with this same title and beneath it, in bold lettering, was the complete text: "While the earth remaineth, seedtime and harvest, cold and heat, summer and winter, day and night shall not cease," each sequence of which was crudely illustrated. Naturally, this made a lasting impression on my youthful mind and these words will now be made to leap into action by means of the motion picture camera.

One can readily see the possibilities our title will present; for example, "Seedtime." Ploughing by horse, mule or tractor will yield scenes filled with action and one may be fortunate enough to meet up with a yoke of oxen to yield additional atmosphere. There are numerous modern implements used to sow seed or even to set plants that could be included, to say nothing about the women and children who are a part of the group in many sections of the country.

"Harvest." The fields of grain, the new-mown hay, the mowers, the reapers, the threshing machines and the workers, if properly filmed, will surely glorify the harvest-time and give the cinematographer lasting pleasure.

One can make attractive stills and by means of the titler create beautiful subtitles.

"Cold." Who doesn't have a very special shot that makes you shiver to look at it? Mine shows our letter-carrier with his head wrapped in a heavy muffler, breath congealing and hands covered with mittens—his very posture symbolizing **cold**. Icicles glinting in the sunlight, a jar burst by the expanding ice will enable one to put the "cold" idea over without difficulty.

"Heat." The city kiddies reveling in the spray from a fire hydrant; the scorching narrow streets; the crowded parks; a close-up of some portly gentleman, collar open, coat over arm, fanning himself with his hat. No, no subjects will be lacking in a quest for "Heat" shots.

"Summer." The beaches, the bathers, the boys splashing in the "old swimmin' hole"; in fact, why not feature the recreational angle of summer? If an ocean voyage or a bus trip is included in your summer itinerary, a wealth of material is at once available.

"Winter." Again winter sports could be featured with some attractive and

Continued on Page 233

Transcending all previous Victor projection achievements, these New 750 Watt Super Hi-Power Victors have skyrocketed 16 mm Illumination and Performance Standards to amazing new heights. They embody valuable new Mechanical and Optical Innovations that are Far in Advance of anything ever before employed in 16 mm manufacture . . . . insuring finer results.

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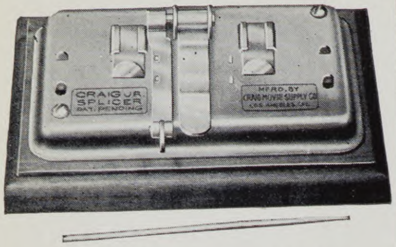

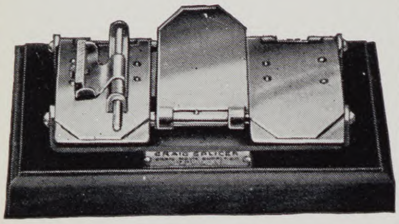

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Survey of Foreign Cinephotography

Continued from Page 226

historical monuments offers a great variety of subjects. Probably more amateur costume play films are being made in France than anywhere else.

There is plenty of equipment from which to choose and it is quite moderately priced. Much experimenting is being done by the amateurs with negatives and positives. Quite a number of them try their own developing with various results. Cine clubs are to be found all over and they, too, have many contests. Several well-informed cine periodicals are published. Well-stocked substandard film libraries are to be found. All the larger cities have processing stations although more speed in delivery is desirable.

France, like many other European countries, has always sent entries to the greater international contests with various results. The 8mm is rapidly making headway.

In addition to the French cameras being marketed there is a wide demand for the American- and German-made cameras.

Owing to the widespread use of 9.5-mm there are a number of cameras like the Motocamera made by Pathe.

In addition to the well-known Kodak 8mm there are several other 8mm cameras of French construction.

Germany also takes its substandard cinephotography very seriously and with proper Teutonic methodical efficiency turns out some very admirable results, though usually technically a bit serious and lacking the warmth of the more spontaneous French efforts. They too, have a wonderful variety of equipment to choose from and perhaps cheaper than any other country.

The Germans, too, have a great many clubs, or "Vereine," and competition is keen. The travel exterior film dominates in entries. Also quite a few play films are being produced. Germany more than any other country has quite a few enthusiasts who make animated drawing films. The trick film is very popular. In general their technique is rather good but their subjects a bit monotonous. However, some very excellent entries have been noticed at the greater international contests. The number of amateurs using negative and positive is quite surprising and a very large part of them do their own processing.

Their publications lean more to the technical side, perhaps neglecting a bit to fan that spirit of fraternity and good-fellowship that is so noticeable in other foreign cine publications. However, they are exceedingly well-informed but as a rule contain information mostly for the advanced amateur. Outside the United States, Germany uses more 16mm for educational purposes than any other country. It has been officially recognized by the German government and quite a few 16mm amateurs have turned 16mm professional.

Germany has a multitude of cameras for the amateur. A very practical camera is offered by the Siemes Co. They manu-

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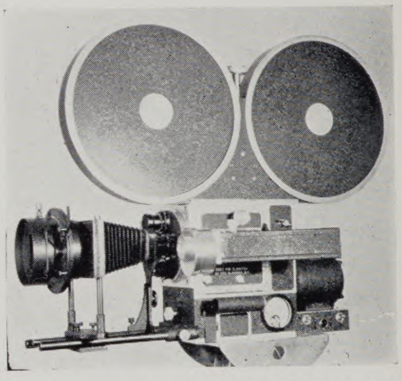

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There are many smaller countries in Europe which are great enthusiasts in Cinephotography and they also have made their marks in the various contests. However, they are mostly dependent on foreign cameras and raw film. I dare say that cine clubs are found in all parts of the world, by no means forgetting Japan. The various prizes won by the Nipponese prove that they are very much awake and have long adopted Amateur Cinephotography as one of the most interesting and educative hobbies one could possibly indulge in.

Backyard Movies

Continued from Page 230

unusual shots of driving snow, big drifts, stalled motor cars and snow-plows. Doubtless most of us have plenty of these in "camphor" awaiting the opportune time to use them.

"Day." Why not show a day's activities? A hand placing the bottles of milk on the back steps; the morning paper dropping on the lawn; bacon and eggs sizzling in the pan; Junior toddling into the scene yawning and only partly dressed. Under this heading can be filmed an interesting record of events centered around our daily life in home and office — not forgetting the many humorous sides—and by so doing much added interest will be gained.

"Night." So much has been written about night photography with high-speed cine and miniature camera lenses since the introduction of super-sensitive films that the amateur cinematographer should be right in his element. As a prelude, however, some beautiful cloud effects over hills, mountains or ocean simulating the coming on of evening should be filmed. Here again home life —arriving from the office, the evening meal, gardening, putting Junior to bed. But why not continue our filming by showing some of the bright lights, too: flashing electric signs, lighted streets, the crowded board-walk or any other night scenes that make for originality?

How shall we end the reel? Fade-out on the last "Night" scene and fade-in on the following—on your titler—giving each little more than a flash: "Seedtime and Harvest," "Cold and Heat," "Summer and Winter," "Day and Night"; then in larger letters giving slightly longer footage: "While the Earth Remaineth" followed by "Shall" (small) "Not" (larger) "Cease" (larger).

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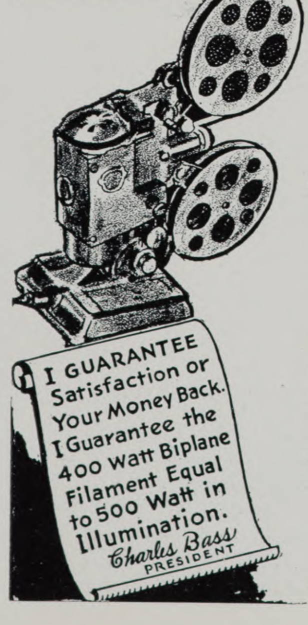
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DIGGING FOR BURIED TREASURE

Continued from Page 222

Scene 22. Close-up of another boy backing away hesitatingly as he speaks:

TITLE: "Let's quit . . . I don't wanna play anymore!"

Scene 23. Continue Scene 22.

Scene 24. Semi-close-up of Jimmy glancing at note then at boys. He speaks:

TITLE: "I'm not scared."

Scene 25. Continue Scene 24.

Scene 26. Close-up of Father as he fails to compose himself; he snickers . . . once . . . twice . . . etc.

Scene 27. Same shot as Scene 24. Jimmy points to his dad and questions the boys; they nod their approval.

Scene 28. Long-shot of boys as they walk up to Father.

Scene 29. Medium shot of Father as he pretends to read. The boys enter the scene, Jimmy speaks to his father, and hands him the note.

Scene 30. Close-up of Father trying to control his emotions as he reads the note. He assumes a serious expression and strokes his chin thoughtfully.

Scene 31. Close-up of boys' faces as they look at one another questioningly.

Scene 32. Continue Scene 30. Father raises his finger motioning them to remain there. He assumes a satisfied look as if to say, "I have found the secret, my boys!" He rises.

Scene 33. Medium long-shot of Father rising from the group and entering the kitchen door.

Scene 34. Medium close-up shot of the boys who are still surprised at the sudden turn of events. (Take this shot looking down at them from the top of porch steps. The boys looking up towards the camera as if waiting for Father's exit.)

Scene 35. Very close close-up of one boy's finger nervously twitching at his shirt.

Scene 36. Same setup as Scene 33 Father exits from the kitchen door with an electric iron in his hand. He touches it; it is hot.

Scene 37. Close-up of Father sitting as the boys gather around. He starts to lower the iron.

Scene 38. Very close close-up of Father's hands as they lay the iron on the steps, face up. He places the note on the hot face.

Scene 39. Same shot as Scene 37 Father begins some hoodoo cants over the note. He waves his hands over it in a mysterious manner.

Scene 40. Close-up of boys' faces as they gape at him and then the note.

Scene 41. Continue Scene 39. Father finally ceases and with a triumphant gesture he points at the note. They crowd in.

Scene 42. (INSERT) Close-up of the note as lines begin to appear on the white spaces. It is a map. (This trick is simple. Write with lemon juice on the white spaces of the note and when heat is applied to the note, the writing or drawing will appear plainly. No double exposure necessary for this trick.)

Scene 43. Continue Scene 41. The boys look up and draw backwards surprised. Jimmy shouts gleefully and picks up the note.

TITLE: "A treasure map! . . . And it's hidden in this yard, too!"

Scene 44. Long-shot of the group as the boys begin to follow the map's directions.

Scene 45. Close-up of Father's amused countenance. He glances over to the spot from where the dust had originated in Scene 7.

Scene 46. Close-up of Jimmy carefully measuring footage. He stops, points downward, and shouts triumphantly:

TITLE: "Here's the spot!"

Scene 47. Medium long-shot as the boys crowd around and begin digging.

Scene 48. Close-up of Spotty. He is lying down and suddenly pricks his ears up and watches the boys intently.

Scene 49. Close-up of Jimmy's face only as he digs furiously. His eyes fairly pop out as he strikes something hard. He looks down surprised at the discovery and then leans backwards. The others peer into the hole. (Tilt camera downward toward the hole revealing contents.) They are dumbfounded to find a bone as the treasure!

Scene 50. Close-up of Father hilariously laughing at the joke.

Scene 51. Medium-shot of Jimmy rising with bone in hand.

Scene 52. Close-up of Spotty growling and barking. He makes a short dash for his property.

Scene 53. Medium-shot of boys as they start to run for safety. Jimmy slips and falls on a board.

Scene 54. Close-up of Jimmy's knickers as they tear on a nail protruding from the board. (Use old golf knickers.)

Scene 55. Close-up of Father as he suddenly realizes they are his new golf knickers. He exclaims:

TITLE: "My new knickers!"

Scene 56. Continue Scene 55 as Father raises his hands to the sides of his head in despair. (Pan down to Spotty, who is licking his retrieved bone in peace.) FADE OUT.

THE END

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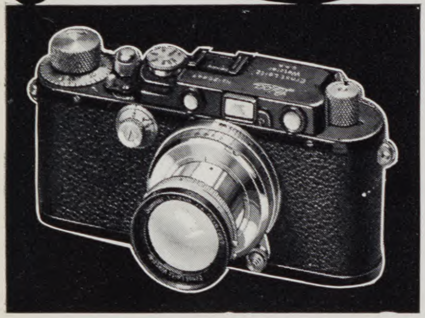

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Principles Underlying Film Tricks

Continued from Page 221

to frighten my readers away from at least trying to get double exposure effects, if you will but think out ways and means before you waste too much film.

Have you made up your "color catalog" yet? If not, by all means do so as soon as you can. The knowledge of what filters can do under certain conditions is apt to be the only solution at times to the attainment of effects impossible in other ways. The illustration in the August issue which Mr. Slifer made shows in a striking manner how completely filters can absorb colors. With your color catalog you can proceed confidently in trick filter shots, so bear with me in the repetition of "make a color catalog now."

The manipulation of the lens focus and diaphragm opening makes possible better cinephotography, as we discovered from Mr. Slifer's other illustration in August. Study your focusing problems as they arise. Try to produce the best possible picture for the subject matter under consideration. Remember that in scenic work or portraiture, the face of the subject is the dominant thing in that picture. Choose the quantity and intensity of light which allows the diaphragm to open wide enough to make the depth of focus short, then focus sharply on the main object.

On the other hand, if you are making miniature shots, take care that you don't have so shallow a depth of focus that it looks like a miniature shot. Use enough light so that the diaphragm may be stopped down for greater depth of focus, and if the picture still looks too much like a miniature shot, use a slightly diffusing filter to soften the sharpness of detail.

A number of readers of CINETRICKS have written their appreciation of the matter written, but have expressed a desire to be shown more definite examples of the tricks used. This seems an excellent idea, but the examples must come from you readers. When the AMERICAN CINEMATOGRAPHER announces the contest, be ready with your own means for doing these tricks, and submit clear photographs, if necessary, of your gadgets along with a concise description and the manner in which you have actually used them in your own filming. I do not know the details of the contest, but I do know you'll be happy to own the equipment which is to be offered as prizes in the contest. Thank you for reading my humble efforts, and if they have been the means of inspiring you to work them out, I've received my reward.

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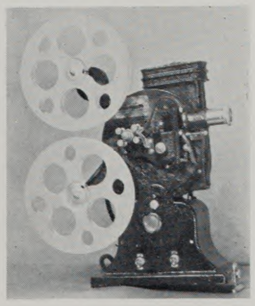

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The Contest ends at midnight of October 31, 1934. All pictures must be entered by the closing date or they will not be considered. Entries, mailed or expressed, bearing a date not later than October 31, 1934, will be accepted.

Pictures submitted in this contest will be judged for photography, composition, direction, acting, cutting and entertainment value. The judges will include outstanding and widely known cameramen, directors, actors, writers and a group of nationally known motion picture critics.

The decision of the judges will be absolutely final and there can be no appeal from their decision. Announcements of the awards will be made as soon after the close of the contest as possible and checks and prizes will be sent the winners.

Pictures may be submitted either by individual amateur movie makers, or they may be submitted by amateur movie clubs. However they must be photographed on 16 millimeter, 9½ millimeter or 8 millimeter film. Each entrant must have his entries accompanied by the sworn statement which will be sent him to fill out. No pictures will be accepted which were photographed on 35 millimeter film and then reduced.

Contestants may enter as many subjects as they desire. One entry blank will cover all subjects put in the contest by that entrant.

The contest is open to amateurs and amateur clubs anywhere in the world.

The $1000 in cash will be divided very simply. There will be a grand prize of $250 for the best all-around picture. There will be from 10 to 15 prizes in the various classifications of $50 each. There will be such classifications as Scenic, Travel, Educational, Scenario, Home Movie, Kodacolor, Technical and any other classifications which might be brought forth by the entries made.

The American Cinematographer reserves the right not to declare a prize for any classification, if in the opinion of the judges, there is not a picture submitted sufficiently good to be classed as a prize-winner.

The American Cinematographer also retains the right to make duplicates of such prize-winning pictures as it may indicate, for free distribution to clubs and amateur organizations throughout the world.

If you intend to enter the contest please send coupon on this page for official entry blank.

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Let's Try Animation

Continued from Page 223

the course of the foot until, in the eleventh drawing (lower left) it is once more on the ground, with the other foot ready to be raised for the next step. This produces a very smooth movement: if we photograph giving one frame to each drawing, we will have a smooth, yet quick step, which is shown on the screen (at the talking-picture speed of 24 frames per second) in just under ½-second. If we want to slow the step, we can shoot two frames of each drawing, and make the step last nearly a second—or even longer, by using three frames per drawing. Sometimes, in making our "Oswald" cartoons, we may use as many as 30 or more frames to show a single step. For amateur films, the silent-picture projecting-speed of 16 frames per second is standard.

The same principle naturally holds good for all movements, and is equally applicable to animated dolls and the like as to drawings. In making such animations, however, the amateur should guard against the peculiar mental effect of working a frame at a time: when you are working this way, you often lose sight of the fact that work which takes quite a while to do actually gives you only a fraction of a second's action on the screen. Naturally, the inexperienced worker will try to hurry—using too few intermediate phases, perhaps too few frames per phase, as well; and the natural result, of course, is over-fast, jerky animation. So the best rule to follow is: two frames per phase; plenty of phases, closely-spaced — and lots of patience. Remember, too, that if you want a thing to be motionless on the screen—either a "prop," such as furniture, or a moving object, temporarily motionless—it has to be motionless while you are shooting! Take care to have your camera firmly in place on a tripod, and avoid moving anything you don't want to see moving on the screen. Most important of all, don't make the mistake of not allowing enough frames for any object you want to show as standing still: remember that each frame is on the screen for only 1/16 of a second—and it takes sixteen frames to make a character stand still for only a second. If you use less, your object will only pause momentarily between its movements, and you won't get the effect of a stop, but rather of a sort of jiggle in the motion.

The best way to learn animation, though, is to study normal film of ordinary action — and study it frame by frame, so that you can see just how the camera spaces its phases of motion. Naturally, you won't by any means have to use as many phases as are actually caught by the movie-camera, but if you pattern your animation closely upon the movement shown in normal films, you'll come very close to getting smooth, normal animation. Try it!

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FOR SALE—3¼x4¼ Korona Pictorial View camera case, 11ex Acme shutter, six cut-film holders. Box 241, c/o American Cinematographer. T

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FOUR Mitchell Cameras for sale. Silent or steel gears with complete equipment $1850 up. Camera Supply Co., Ltd., 1515 N. Cahuenga Blvd., Hollywood, Calif.

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MOTION PICTURE and Still Cameras, all types Lenses, Finders, Tripod Heads, Leica or Contax Cameras. Cash for bargains. Camera Supply, Ltd., 1515 Cahuenga Blvd., Hollywood, Calif.

WANTED—Arri Model E 16mm printer. Must be in excellent condition and cheap for cash. Box 242, c/o American Cinematographer. S

WANTED—A used Bell & Howell Camera, with regular standard B & H Tripod, and set of 4 lenses—40mm, 50mm, 75mm and one 4-inch lens. This camera need not have a cine-motor, or Matte box. Box 243, c/o American Cinematographer. T

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Another Contest

Here's how it works. Send us in tricks you have done in filming with your 8mm, 9½mm or 16mm camera. Explain them to us so that we can explain them to others in the pages of American Cinematographer.

For every one we publish you will be entitled to your choice of one of the prizes listed below.

By Gadgets we mean little pieces of equipment you have built, designed or devised. Equipment that works. Little gadgets you have added to your camera, projector or otherwise. For instance, we heard of one fellow who built a splicer out of a mousetrap . . . that's a gadget.

What kind of gadgets have you made . . . what sort of tricks do you do with your camera or equipment? If necessary send us a rough sketch or a snap shot of your equipment if it will help describe it better and quicker.

Here's Your Chance to Win Equipment or Film

Frequently we have published what might be termed tricks. Such as making distorted effects by pouring sweet-oil over a glass in front of the film. Others have been published from time to time.

In the way of gadgets we have reported many things from the building of a complete 16mm camera by amateurs down to making their own reels.

What Have You Done?

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- 3 Reels and 3 Cans
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- Humidor Can Case for 12 Reels
- 22x30 Beaded Screen
- 3 Clamp Lamp Reflectors with 3 Photoflood Lamps
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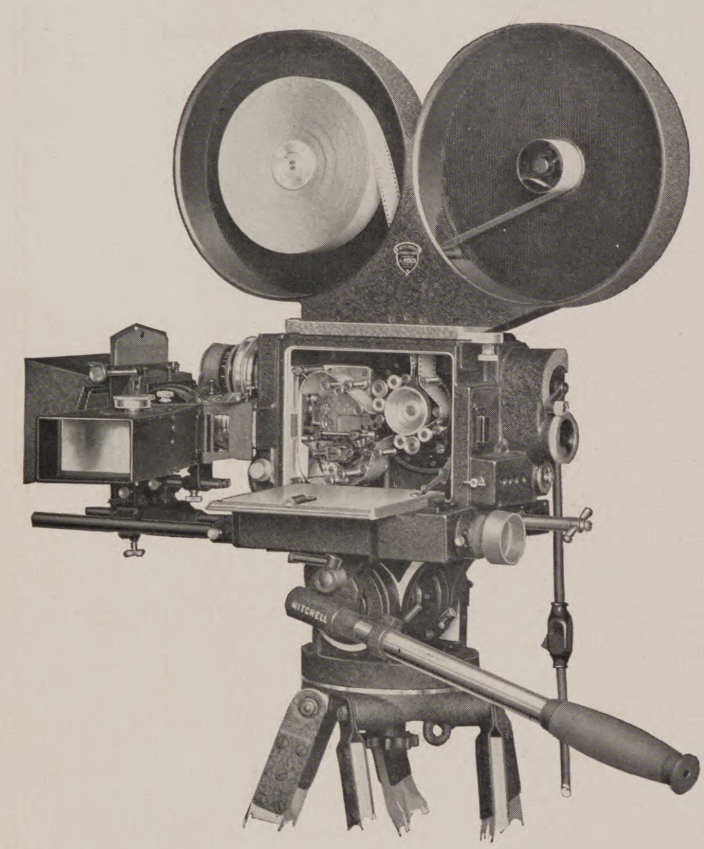

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